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The Identification and Differentation of Selected Professional Competencies for Agricultural Educators

Ronald E. Stoller

THE IDENTIFICATION AND DIFFERENTIATION OF SELECTED PROFESSIONAL COMPETENCIES FOR AGRICULTURAL EDUCATORS

by

Ronald E. Stoller

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ABSTRACT

THE IDENTIFICATION AND DIFFERENTIATION OF SELECTED PROFESSIONAL COMPETENCIES FOR AGRICULTURAL EDUCATORS

Ronald E. Stoller, Ph.D.

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Advisor: James T. Horner

Purpose of the Study

The primary purpose of the study was to determine whether a common core of professional competencies for agricultural educators could be identified. The study was also designed to identify and differentiate professional competencies most important for individual respondent groups.

Assumption

It was assumed that all agricultural educators were proficient in the necessary technical agricultural subject matter such as, agronomy, animal science, to perform their job. Only selected professional competencies as they relate to the pedagogy for teaching were studied.

Procedure

A study questionnaire containing 147 professional competencies was developed and tested with the aid of a national jury of experts, pilot interviews, local professors, and a small group of agricultural educators.

The questionnaire was mailed to a randomly selected sample of 120 instructors of secondary vocational agriculture, 53 instructors of postsecondary vocational agriculture, and 120 county extension agents in Kansas and Nebraska. The sample also included 60 college professors and heads of departments in agricultural education and agricultural extension from the United States. A total of 357 questionnaires was mailed and there were 327 usable questionnaires returned. This was a 91.6 percent return.

The responses from the college professors were used as a guide when making the analysis of each frequency table for assigning each competency to a group. The null hypothesis was tested to determine if significant differences existed between the groups. A theoretical model was developed and served as the framework for the study. Categories within the model were: A. Analysis of the situation, B. Planning the education program, C. Teaching methods and techniques, D. Evaluation, E. Reevaluation of local situation and F. Prerequisite personal characteristics.

Selected Findings and Conclusions

1. There were 74 professional competencies identified and assigned to the centfal or common core of competencies essential for all respondent groups studied. These were competencies identified from all categories within the model.

2. Instructors of secondary vocational agriculture and county extension agents were in agreement that six additional competencies

were essential. Among those considered essential were included: working with community groups, recognizing ethnic groups, leadership training, and the teaching of approved practices with youth to teach adults.

3. Instructors of secondary vocational agriculture selected four competencies essential especially for their group. The major emphasis suggested was a need to work with disadvantaged and handicapped and use of parliamentary procedure.

4. Instructors of secondary and postsecondary vocational agriculture responded to 21 professional competencies as essential for both groups. Most important among these included: use of testing, grading, discipline, shop demonstrations, occupational experience programs, classroom problem solving techniques, and knowledge of employment opportunities for their students.

5. The postsecondary instructors of vocational agriculture selected only two professional competencies. They were: use of standardized tests and making photo slide sets for teaching.

6. County extension agents selected 16 professional competencies with emphasis on: analysis of the community situation, the history and organization of extension service, relationship with all departments within the university, understanding the power structure, role and function of institutions and agencies in the community, translating research to the people, use of background material for planning groups, work with large groups, conducting field days, maintaining a news and information service and delegating authority

to co-workers.

It was evident that many professional competencies for agricultural educators, namely instructors of secondary and post-secondary vocational agriculture and county extension agents were similar; however, some differences were also identified. Therefore, differences in emphasis may be necessary in preservice and inservice programs to meet the needs for each specific group. The similarities noted in the central core appear to be items that can be included in preparation programs for all groups and the differences noted may be a guide to provide specialized preparation for each individual group.

ACKNOWLEDGEMENTS

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Special appreciation is extended to Dr. James T. Horner who served as chairman of the supervisory committee. Appreciation is also extended to Dr. Robert J. Florell, Dr. Wesley C. Meierhenry, Dr. Otto G. Hoiberg, and Dr. Roy D. Dillon who served as members of the supervisory committee.

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CHAPTER I

INTRODUCTION

Rapid changes in agriculture brought about by profound advances in science and technology necessitate a continued scrutiny of preservice and inservice programs of professional agricultural educators. Departments of Agricultural Education at various universities have traditionally been committed to provide preparation programs primarily for instructors of vocational agriculture in secondary schools. However, in recent years, responsibilities of these departments at many colleges have been broadened to include educational programs to also prepare county extension agents, and instructors of postsecondary technical agriculture and others who may become agricultural educators in other governmental and private entities. This suggests a broad and diversified preparation program. In view of the changing perspectives of agriculture, as well as more diversified clientele who are now being prepared by Departments of Agricultural Education, it would seem advisable that a study be made to determine whether professional agricultural educators in the field have experienced a need for different preparation programs.

The literature reviewed indicates that the various groups of professional agricultural educators have fairly well developed repertoires of research within their respective groups. There was little or no research to compare or determine whether there is a common core of

competencies needed to perform the professional educational process in the field of agricultural education.

The Problem

The purpose of this study was to determine from the various groups of professional agricultural educators in the field whether a common core of professional competencies could be identified and whether there were differences in the competencies needed among the various groups.

Delimitations

The study was limited to a random sample of 120 instructors of vocational agriculture at the secondary level, 53 at the post-secondary level and 120 county extension agents in Kansas and Nebraska. A stratified random sample of 60 national experts, namely, chairmen of Departments of Agricultural Education and directors and/or state leaders of extension education and training were also asked to identify competencies needed for instructors of vocational agriculture and county extension agents in the field.

Definition of Terms

Instructor of secondary vocational agriculture. A person responsible for teaching and conducting a reimbursable vocational agriculture program in a secondary school, authorized by federal and state legislation including the Smith-Hughes Act of 1917 and subsequent legislation.

Instructor of postsecondary agriculture. A person responsible for conducting a postsecondary agricultural education program at a technical level in a posthigh school, vocational technical school or unior or community college (often comparable to the thirteenth or fourteenth year of instruction and may or may not be reimbursable.

County extension agent. A person responsible for conducting an educational program at the local level under a cooperative arrangement with the state land-grant university, the United States Department of Agriculture and the local county or area organization, authorized by the Smith-Level Act of 1914, with subsequent agreements and revisions. (In this study, the term county extension agent will refer to county extension agent chairman.)

Professional competency. The term professional competency or competencies in this study refers to the capabilities an educator is likely to need so that he may perform the educational task assigned to him. This would include the knowledge, skills, and abilities he has acquired through professional study and/or experience, and personal characteristics that are prerequisites to their development.[1]

Agricultural educator. A person who works primarily in the area of agriculture and has a responsibility for planning, developing,

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[1] H. Del Schalock, A Competency Based, Personalized and Field Centered Model of An Elementary Teacher Education Program, Nine program models submitted to the U.S. Office of Education, Northwestern Regional Educational Laboratory (Washington, D.C.: U.S. Government Printing Office, FS 5 258 58033, 1969), pp. 40-43.

implementing, coordinating, and evaluating an agricultural education program such as an instructor of vocational agriculture or a county extension agent.

The Design of Study

A theoretical model as presented in Figure 1 was developed from various models of curriculum development,[2] program evaluation,[3] program development,[4] and a change model for learning.[5] This model provided the framework for the development of the five categories that depict the process followed from planning through evaluation of an agricultural education program. The model as illustrated delineates the educational process into five overlapping categories assuming those competencies that were similar to all groups fell into a center core and those competencies that were only common to one group fell outside the center core.

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[2]Galen J. Saylor and William M. Alexander, Curriculum Planning for Modern Schools (New York: Holt, Rinehart and Winston, Inc., 1966), pp. 272-73.

[3]Einar R. Ryden, "Designing a Staff Development Procedure," Report presented at Cornell University, Ithaca, New York (1969), p. 4. (Mimeographed.)

[4]Lincoln David Kelsey and Cannon Childs Hearne, Cooperative Extension Work (Ithaca, New York: Comstock Publishing Associates, 1964), Appendix 2 by J. Paul Leagans, pp. 481-82.

[5]Ronald Lippitt et al., The Dynamics of Planned Change (New York: Harcourt, Brace and World, Inc., 1958), pp. 122-23.

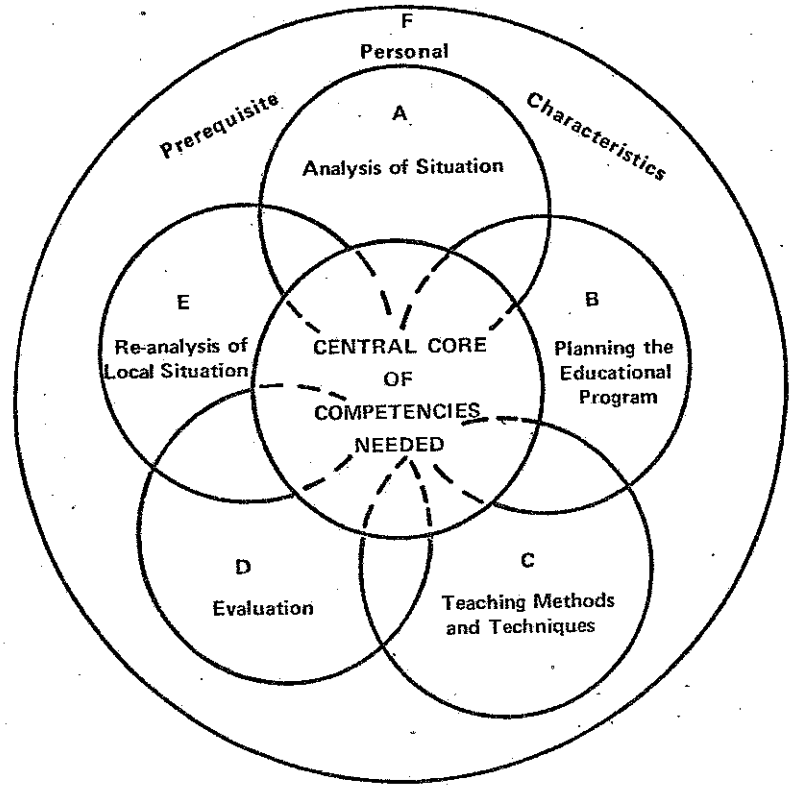

Figure 1

A Theoretical Framework for Determining Competencies of Professional Agricultural Educators

A. Analysis of Situation

Data inventory. Identification of total resources within the community including economic, sociological, natural, human, etc. Base line data.

B. Planning the Educational Program

Defining the problems and priorities of the educational program. Determining objectives and possible alternatives in view of the resources available. Long range and short range goals and analysis of problems. Determination of the difference between what is and what should be.

C. Teaching Methods and Techniques

Which method or combination of methods should be used? Determination of which methods or techniques to be used in view of the objectives and resources available.

D. Evaluation

Assessment of what has been accomplished by the objectives and standards which were determined in step B. Did the educational program accomplish the objectives sought?

E. Re-Analysis of Local Situation

What needs to be done or repeated to accomplish the original objectives or to accomplish new objectives which have been derived from the educational program or normal change? Determine how the situation has changed. Re-examine the goals — Re-establish objectives and repeat the planning process.

F. Prerequisite Personal Characteristics

Those personal traits necessary for the development of other competencies.

Assumptions

The model was developed on the premise that agricultural education programs were derived through a similar sequential process illustrated in the theoretical model. It was further assumed that all professional educators had some similar responsibilities for agricultural education programs and were proficient in the technical agricultural subject matter necessary to perform their jobs.

It was further assumed that the agricultural educator on the job would be an excellent person to determine those competencies needed to perform his job and that certain personal characteristics were necessary for the development of the competencies needed by an agricultural educator.

Hypothesis

The following null hypothesis was assumed.

1. There are no differences in the professional competencies needed by instructors of vocational agriculture at the secondary or postsecondary level and county extension agents.

Design and Procedure

A checklist type of questionnaire with one hundred forty-seven competencies was developed and mailed to a randomized sample of instructors of vocational agriculture at both the secondary and postsecondary level, and county extension agents. Respondents from

both Kansas and Nebraska were used for the study. In addition, a sample of college professors and department heads of agricultural education and extension education from a number of states within the United States were included in the sample population. All respondents were asked to check one of three measurements for each competency listed. These measurements were: (1) not needed for my job, (2) need to know but not essential, and (3) essential for my job.

Analysis of Data

The results of all respondent groups were tabulated with frequencies shown. Chi Square, a measure of nonparametric statistics, was used to test whether significant differences existed. The data were reported in both tabular and narrative form.

Organization of the Study

This study is divided into five chapters. Chapter I presents an introduction and purpose, the definitions of terms, a theoretical framework for the study, the hypothesis upon which the study was based, a brief description of the sample population, and how the data were analyzed.

Chapter II presents a review of selected literature and current research as it related to this study.

Chapter III includes a detailed discussion of the method and procedures used to develop the study instrument and how the sample

population was identified and selected. It also provides descriptive data about the sample population and the methods used for the analysis of the data.

Chapter IV reports the findings of the investigation. It includes a detailed narrative and tabular form of the statistical analysis of the data.

Chapter V presents a summary, conclusions and recommendations based on this study.

The appendices provide a copy of the individual frequency tables, the study questionnaire, and cover letters for this study.

CHAPTER II

REVIEW OF SELECTED LITERATURE

The review of literature provides the rationale for this study. It includes (1) an overview of competency studies as a need for planning teacher preparation programs, (2) a review of federal legislation that has influenced preparation programs for teachers of agriculture, also confirming the need for this study, and (3) an overview of the needs of agricultural educators as prescribed by professional agricultural educators in the field.

Rationale for a Study of Teacher Competencies

Mager and Beach summarized succinctly the problems encountered when determining the desirable qualities for identifying successful teachers. They listed qualities such as sincerity, efficiency, courage, resolution, energy, tact, personality, and several others as part of a seemingly endless list and felt that no one is really certain of how the list should be used.[1] All of these traits may be considered as part of those elements desirable for certain competencies.

On the other hand, Timbers presented a clear case to support the theory that competencies must be identified and defined. He

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[1]Robert F. Mager and Kenneth M. Beach, Jr., Developing Vocational Instruction (Palo Alto, California: Fearon Publishers, 1967), pp. 5-8.

felt that:

> Training that is directed toward specific and clearly identified needs is more efficient and economical, because there is less wasted time and hours consumed in accomplishing the organizations' training mission. By defining training needs before commencing training both long and short term objectives can clearly be accomplished. Training becomes purposive. It can move toward a predetermined target at a definite speed and unnecessary and irrevelant needs will have become jettisoned . . . . Defining training needs, therefore, is signally important as a prerequisite to the commencement of a successful training program.[2]

In 1967, college professors from twenty-six colleges and universities in the Northwest Region of the United States launched an area planning consortium to develop specifications for a model teacher education program for elementary teachers. They responded to a nationwide request from the U.S. Office of Education to participate in the development of model programs. Their model, one of nine, that was developed was entitled, A Competency Based, Field Centered Systems Approach to Elementary Teacher Education. Their model has many commonalities for all areas of teacher preparation and is based upon the competencies teachers actually needed in the field. The conceptual philosophy underlying the model included the following:

1. that the objectives of a teacher education program should be specified in terms of the competencies needed by teachers to bring about the outcomes desired in pupils;

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[2]Edwin Timbers, "Defining Training Need," Training Directors Journal, XIX (February, 1965), 17.

2. that overt behavior acceptable as evidence of given teaching competencies should be specified;

3. that systems' design principles should be used in development of instructional experiences to bring about the mastery of teaching competencies;

4. that there should be evidence that professional competencies are integrated into a unique and personal "teaching style," and that a student should be able to be provided a rationale for the application of that style in any given situation; and

5. that the desired teaching competencies should be demonstrated under laboratory conditions prior to the assumption of supervised responsibility for the learning of children in the schools, and that they should be demonstrated to criterion under classroom conditions prior to assuming full responsibility.[3]

Another study reported by the U.S. Office of Education asserted that:

> Competencies in instruction must always be thought of in terms of the ability to bring about specific outcomes for the specific child or set of children who have specific characteristics and who are operating in a specific instructional setting.[4]

One of the reasons stated for the concern for field-centered, competency-based teacher education programs was explained in the model for elementary teachers' final report. It stated:

> Teacher education is seen increasingly out of touch with reality because of missing links between preservice

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[3]H. Del Schalock and James R. Hole, A Competency Based, Field Centered, Systems Approach to Elementary Teacher Education, U.S. Government Department of Health, Education and Welfare, Final Report, Project No. 89022, Vol. I (Washington: U.S. Government Printing Office, 1968), pp. 1-18.

[4]U.S. Department of Health, Education and Welfare, Analytic Summaries of Specifications for Model Teacher Education Programs (Washington: U.S. Government Printing Office, 1970), p. 106.

> and inservice training, between school systems and colleges of education, between faculty and students, between college and community, and among colleges of education and innovators. These linkages are seen to diagnose performance needs of teachers and to develop appropriate curricula. There is a need to utilize human relations' laboratory training, theory, methods, and knowledge in creating models for collaborative planned improvement. Concern has been expressed over the discrepancies between current teacher education practice of "what might be" if available knowledge about human behavior and organization and community development were utilized.[5]

Amidon and Hunter identified seven descriptors essential for a good teacher. They felt effective teaching involves more than a knowledge of subject matter. They contended that every teacher or would-be teacher must engage in a study of teaching and acquire the genuine "how" of teaching. They suggested teachers' behaviors should be examined in terms of their ability for: motivating, planning, informing, leading discussions, disciplining, counseling, and evaluating.[6]

A statement by Houle at the fifth National Administrative Workshop in Madison, Wisconsin, reflected an emerging need for teachers of adults such as extension workers. It suggests insight into the psychological process of man:

> Facts and skills must be taught, but we are coming to believe that we should not aim directly at them but at

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[5]Schalock and Hole, op. cit., p. 16.

[6]Edmund Amidon and Elizabeth Hunter, Improving Teaching, The Analysis of Classroom Verbal Interaction (New York: Holt, Rinehart and Winston, 1966), pp. 1-7.

what lies behind them: insight, attitudes, and appreciation.[7]

Miller concluded in a competency study that teacher educators and supervisors of industrial arts strongly agreed that competencies related to the area of teaching methods and techniques were more important than those pertaining to course content. He also found that teacher educators and supervisors agreed that competencies related to personal qualities and behavioral characteristics were generally the most important competencies needed by the instructors.[8]

Feck determined that competencies rated most important for postsecondary teachers in the United States were in the areas of planning instruction, teaching, and public and human relations. Those competencies related to work in student organizations and the new audiovisuals were most frequently rated the lowest of importance by the teacher respondents. More than fifty percent of the teacher respondents indicated a desire to enroll in inservice courses in the areas of planning for instruction, teaching, evaluating instruction, guidance, management, and public and human relations.[9]

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[7]Cyril Houle, Some Essentials in Program Development, Cooperative Extension Administration--Report of Fifth National Administrative Workshop (Madison, Wisconsin: National Agricultural Extension Center for Advanced Study, University of Wisconsin, 1956), p. 35.

[8]James Arthur Miller, "Functional Competencies Needed by Industrial Arts Instructors to Adequately Perform in Contemporary Industrial Arts Laboratory/Classrooms" (unpublished Doctor's dissertation, University of Northern Colorado, 1971).

[9]Vincent Joseph Feck, "Characteristics and Professional Competency Needs of Teachers of Agriculture in Two Year Technical Institutes or Colleges in the United States" (unpublished Doctor's dissertation, The Ohio State University, Columbus, 1971).

Influence on Federal Legislation on Agricultural Education Preparation Programs

Beginning in the second decade of the twentieth century, a small portion, approximately four percent of the money spent on public education in the United States, was collected through taxes and redistributed by the federal government. The authorization provided funds primarily for vocational education for rural areas by the Smith-Hughes and Smith-Lever Acts. The character and rate of funds for public education channeled through the federal government changed little from 1920 to 1958. Faced with a new generation of problems and increased public concern for education, Congress responded this past decade by passing a number of bills authorizing broader programs and additional federal funds for public education. Federal support for education nearly doubled between 1958 and 1970.

Departments of Agricultural Education at many universities with the aid of federal funds have for many years been responsible for the preparation of instructors of vocational agriculture at the secondary school level. In recent years many of these same departments have been given broader responsibilities to include the preparation of county extension agents and instructors of postsecondary agriculture.

Swanson and Persons emphasized that little research has been done in the area of changing preparation programs and curricula

to implement the new legislation for vocational education in agriculture.[10]

Traditionally preparation programs for vocational agriculture were focused on preparation of teachers of reimbursable vocational agriculture in the local secondary school in accordance with the guidelines established by the Smith-Hughes Act. The U.S. Office of Education listed the following as objectives of vocational agriculture in compliance with the Smith-Hughes Act.

1. Make a beginning and advance in farming.
2. Produce farm commodities efficiently.
3. Market farm products advantageously.
4. Conserve soil and other natural resources.
5. Manage farm business.
6. Maintain a favorable environment.[11]

Preparation programs for county extension agents were also guided for many years by federal legislation, namely the Smith-Lever Act. Their preparation programs, generally outside the Department of Agricultural Education, were designed to meet the needs of the enabling legislation. Federal legislation designated the duties of

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[10]George I. Swanson and Edgar Persons, "Agricultural Education," Encyclopedia of Educational Research, ed. Robert L. Ebel (4th ed.; London: The Macmillan Company, Collier Macmillan, Lts., 1969), pp. 66-74.

[11]U.S. Office of Education, Administration of Vocational Education (Washington, D.C.: U.S. Government Printing Office, 1948), p. 38.

a county extension agent as a person to:

> . . . aid in diffusing among the people of the United States useful and practical information on the subjects relating to agriculture and home economics and to encourage the application of the same.[12]

Price concluded in his study that Arkansas county extension agents have also felt their job as one of service and not particularly educational.[13]

Cunningham provided an inservice workshop for cooperative extension staff in Ohio to emphasize the improvement of instruction. The Ohio Director of Extension keynoted the workshop and asserted, "That's what we are--teachers." Many extension workers possess technical agricultural subject-matter competence but may lack the expertise to teach it.[14]

Flexibility of Agricultural Education Programs to Meet the Needs of a Changing Agricultural Society

The Smith-Hughes Act of 1917 provided the first federal financial assistance for the local school to teach agriculture. This local assistance required that the programs conform to state guidelines and the limitations of the law.[15]

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[12]Amended Smith-Lever Act, Public Law 83, 83rd Congress, Chapter 157, First Session S 1679 (Appendix 1, Kelsey and Hearne, Cooperative Extension Work, Ithaca, New York: Comstock Publishing Associates, 1963), p. 477.

[13]Randel K. Price, "An Analysis of Educational Needs of Arkansas Extension Agents" (unpublished Doctor's dissertation, University of Wisconsin, 1960).

[14]Clarence J. Cunningham, "Improving Instruction: A Case Study," Journal of Cooperative Extension, V (Spring, 1967), 47-54.

[15]Public Law 347, 64th Congress, Approved February 23, 1917.

The guidelines became rather limiting in many local schools and were not attuned to the rapid changes taking place in agriculture. This also resulted in limitations of innovative preparation programs to meet local needs of their students.

Although important, additional federal legislation, such as the George-Reed Act of 1929,[16] the George Ellzey Act of 1934,[17] the George-Dean Act of 1936,[18] and the George-Bardon Act of 1946,[19] influenced vocational agriculture, these acts primarily provided additional funding following the guidelines of the original Smith-Hughes Act.

Provision of Opportunities for Change by Legislation in the 60's

The Vocational Education Act of 1963 brought an end to many barriers and broadened the guidelines to permit comprehensive programs to meet changing needs at the local level.[20]

Vocational education in agriculture was no longer limited to the preparation of persons "to enter upon the work of the farm or of the farm home." (Smith-Hughes Act) Now it includes education in any occupation involving the knowledge and skills in agriculture.[21]

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[16] Public Law 702, 70th Congress, Approved February 5, 1929.

[17] Public Law 245, 73rd Congress, Approved May 21, 1934.

[18] Public Law 673, 74th Congress, Approved June 8, 1936.

[19] Public Law 586, 79th Congress, Approved August 1, 1946.

[20] Public Law 88-210, 88th Congress, Approved December 18, 1963.

[21] U.S. Superintendent of Documents, The Vocational Education Act of 1963, U.S. Department of Health, Education and Welfare (Washington: U.S. Government Printing Office, 1965), pp. 1-23.

The National Advisory Council on Vocational Education appointed by the President of the United States was instrumental in molding recent legislation to broaden vocational programs designated in the 1963 revisions. Recommendations from their findings suggested the following imperative needs and were the basis for the 1968 Vocational Education Amendments:

1. More emphasis for equipping each man to fulfill a suitable job.

2. More emphasis on employment as a source of income and status for workers.

3. Reorientation of values is needed to satisfy a new set of closely interwoven functions.

4. Provide an opportunity to improve individual employment status and earnings to help him adapt to changing economic environment.

5. Career consciousness must be integrated throughout the schools in order to enlarge the number of options or alternatives for each individual.

6. Students should study the world of work to instill the necessity for education, both academic and vocational.[22]

The Vocational Education Amendments of 1968 have allowed additional flexibility to meet local needs for vocational education. They provide for vocational education programs for:

> . . . persons of all ages in all communities of all states, which are designated to insure that education and training programs for career vocations are available

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[22]U.S. Superintendent of Documents (comp.), Vocational Education: The Bridge Between Man and His Work, Summary and Recommendations of National Advisory Council (Washington: Government Printing Office, Catalog No. F. S. 5.280:80053, 1968), pp. 4-5.

to all individuals who desire and need such education and training.[23]

Swanson and Persons' analysis of today's needs in agricultural education pointed out that while the numbers of persons engaged in agricultural production has been declining, the demand for more specialized services related to agriculture has been increasing. They felt the changes needed by agricultural educators should include (1) more adequate off-farm occupational programs including such areas as human relations, English, and mathematics, (2) modified plans by State Departments of Education, and (3) a better understanding by school administrators of the rationale for expanded agricultural education programs.[24]

A survey by Horner also suggested changes in preparation programs with more emphasis in the interdisciplinary areas of sociology, psychology and economics, the use of multi-mediated instructional materials, better use of curriculum committees and more emphasis on communication skills.[25]

A study by Ruf concluded that the agri-business concept made possible by the 1968 amendments was well accepted and did

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[23] Public Law 90-576, 90th Congress, Passed October 16, 1968.

[24] Swanson and Persons, op. cit., pp. 66-74.

[25] James T. Horner, "Challenges for the Seventies in Agriculture Education," Address presented to Agricultural Section of the American Vocational Association Conference, December 8, 1967, Cleveland, Ohio. (Mimeographed.)

prepare students for occupations related to agriculture.[26]

The joint United States Department of Agriculture and National Association of Universities and Land Grant Colleges Study Committee made an extensive assessment of needs as they relate to the county extension educator. They provided evidence to indicate that a new set of disciplines should be added to the preservice and inservice preparation programs for extension workers. They felt competencies involving the concerns of human beings must come from many of the colleges within the universities.

> This kind of knowledge needed for agricultural programs is also changing with the continuing expansion of technology and changing economic and social structure . . . . Law, business administration, engineering and public health are becoming the disciplines that will contribute to the future . . . . To be effective they must be able to relate to the audiences they serve . . . . They need to know about the educational process and skillfully use communications media.[27]

Ryden felt the extension educator of the future needs a minimum of two specialities: one in which he has gained considerable depth in some scientific subject-matter area and the other, depth and breadth in what might be called general education in the social sciences. This includes those teaching skills in small group behavior, adolescent behavior and those human behaviors relating to

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[26]William Adolph Ruf, "Development of the Agriculture Programs at the Willmar Area Vocational Technical Institute" (unpublished Master's thesis, University of Minnesota, St. Paul, 1970).

[27]Joint USDA-NASULGC Study Committee on Cooperative Extension, A People and a Spirit (Fort Collins, Colorado: Colorado State University Publication Service, 1968), pp. 73-78.

special community problems. Ryden stressed that the agricultural extension agent is basically an adult educator who must make use of modern educational technology to increase the efficiency in the dissemination of information and also improve teaching practices.[28] Knowles also agreed with Ryden:

> Extension work is essentially adult education and your primary channel of influence, even to youth is through adult volunteers. Your objectives are educational, with emphasis on changing behavior.[29]

Knowles also pointed out that since public participation in agricultural extension is voluntary and no degrees are given, that needs, interests, problems and motivations of the clientele are of utmost importance.[30]

Thompson suggested that many of the sociological pressures that have bombarded education have placed agricultural education in a rather enviable position because it deals with the production of food for a rapidly expanding population and the dynamic industrial expansion will demand employees with special skills. He felt that agricultural education in the 80's will need a blending of applied sciences together with applied behavioral sciences to bridge the

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[28]Einar R. Ryden, "Designing a Staff Development Procedure," Report presented at Cornell University, Ithaca, New York, 1969. (Mineographed.)

[29]Malcolm S. Knowles, "What Does Graduate Study in Adult Education Offer?" Extension Service Review, XXXIV (January, 1963), 5, 21.

[30]Ibid., p. 2.

gap between technology and human values. His specific recommendations include: (1) continue vocational preparation for farming, (2) more emphasis on preparing for jobs relating to agricultural occupations, and (3) students must be counseled to accept the need for retraining due to rapid obsolescence of jobs they now have.[31]

This suggests the ever-increasing need for preparation of educators to serve adults. The great diversity of occupations in agriculture in the future also suggests that a teacher of agriculture may not possess the breadth and depth of knowledge and skills to provide for all his students. There will be a shift to individualized programs with teams of teachers using modern teaching technology to deal with today's problems. The traditional approaches may rapidly become obsolete. The agricultural educator's role will become more critical with emphasis on retraining, occupation training, for the disadvantaged youth and adults and continued emphasis on production agriculture to prevent world famine.

Peterson and Zikmund found that some of the first-year vocational agriculture instructors expressed an unfavorable attitude toward teaching adults.[32]

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[31] O. E. Thompson, "Agricultural Education in 1980--A Look into the Future," The Agricultural Education Magazine, XLII (July, 1969), 16-19.

[32] Roland L. Peterson and Dale G. Zikmund, "An Evaluation of Selected Behaviors of First Year Vocational Agriculture Teachers in Nebraska Public Secondary Schools" (unpublished Research Department Report, University of Nebraska, Department of Agricultural Education, 1970).

Instructors of vocational agriculture have been prepared primarily to teach in secondary school programs with limited preparation for teaching adults. According to Woodin, tomorrow's teachers of vocational agriculture will need to give more attention than ever before to preparing their students for gainful employment. It will be increasingly important for vocational agriculture teachers to understand career opportunities other than production agriculture and counsel with students about these opportunities.[33] Herr stressed the importance of the teacher of vocational agriculture in occupational guidance.[34]

Bail in a study in West Virginia found that a "well rounded" groundwork of courses in technical agriculture was desirable for prospective vocational agriculture instructors. Student teaching materials and methods received the greatest sanction by the teachers in the field.[35] Garris stressed the need for greater proficiency in skills and application of the theories of teaching. He listed thirty supervisory needs for beginning teachers.[36]

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[33]Ralph J. Woodin, "Common Competencies for All Vocational Teachers," The Agricultural Education Magazine, XXXVII (February, 1965), 187.

[34]Robert D. Herr, "The Role of the Vo-Ag Teacher in Occupational Guidance," The Agricultural Education Magazine, XXXI (April, 1959), 227-29.

[35]Joe P. Bail, "Teachers Evaluate Their Preparation," The Agricultural Education Magazine, XXVI (March, 1954), 255.

[36]E. W. Garris, "Supervisory Needs of Beginning Teachers," The Agricultural Education Magazine, XXV (April, 1953), 231.

Swanson and Persons cited a doctoral study by Gadda which identified several areas of weakness in the preservice preparation of teacher education of South Dakota. These areas were: performing guidance services, teaching young and adult farmers, conducting public relations programs, and the supervised farming program.[37]

Emerging Needs for Agricultural Educators in Postsecondary School Programs

Recent state and federal legislation has prompted an upsurge of community and junior colleges to meet the expanded need for post-high school education which has brought about an increased demand for posthigh school agricultural teachers. McMillion pointed out in a study of Minnesota there are 60 postsecondary teachers of agriculture in their schools. He also surveyed 36 states and found that 28 departments of agricultural education had conducted special courses for instructors of postsecondary agriculture. The general area of need indicated by the majority of posthigh school teachers in Minnesota was: methods of instruction, recruiting students, use of all types of modern media, principles of learning and making follow-up studies.[38]

Technical education in posthigh schools is a rapidly developing

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[37] Swanson and Persons, op. cit., p. 69.

[38] Martin B. McMillion, "Teacher Education for the Post-High School," The Agricultural Education Magazine, XLII (January, 1970), 181-83.

area of agricultural education. The movement has emerged predominantly during the past decade and was given impetus with the enactment of the Vocational Education Act of 1963 and Amendments of 1968.

A similar demand is evident in many states and would imply that departments of agricultural education at the colleges give some attention to this need.

Summary of the Review of Literature

It was evident from the literature reviewed that competency studies in many areas are now becoming a desirable procedure to determine those behaviors which are acceptable evidence of teachers' and educators' ability to perform the task assigned them.

It was also evident that professional competencies relating to the pedagogy of teaching, especially agriculture, was of great importance with little evidence that much research is now being done in this area.

Evidence indicated that recent federal legislation has continued to provide financial support and permitted broad changes and innovations in agricultural education programs at both the local schools and the college teacher preparation programs.

It was also evident that many agricultural educators felt that a broader range of skills will continue to be important for agricultural educators.

CHAPTER III

PROCEDURES AND METHODS USED IN THIS STUDY

This chapter explains the development of the study questionnaire used to collect the data, the method used in the selection of the sample population, a description of the sample population, and the procedures used for the analysis of the data collected.

Development of the Questionnaire

The study questionnaire used was developed from a review of selected literature, the writer's past experience, the theoretical model developed for this study,[1] and interviews and trials with many people. A checklist of 172 competencies was developed and systematically revised. The checklist was reviewed by several knowledgeable agricultural educators and then tested with eight pilot interviews, four in Kansas and four in Nebraska. The pilot interviews were held with professors of agricultural education, professors of extension education, instructors of vocational agriculture and county extension agents. The pilot interviews served to further revise and validate the instrument.

The revised questionnaire was then mailed to a national jury of agricultural experts who were selected at random using a table of random numbers, selecting eight professors of agricultural education

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[1] See Figure 1 in Chapter I of this study.

and eight professors of extension education from a circularized current mailing list. All sixteen jury members responded returning the questionnaire with their suggestions for revision.

The questionnaire was then revised again and tested on an informal basis, sampling ten agricultural educators not included in the sample, both instructors of vocational agriculture and county extension agents.

Following the final revision, the questionnaire was printed for distribution by mail on five different colors of paper. The color code was used for identification of the different respondent groups.

The questionnaire was also designed to permit tabulation and analysis by automated processing. A punching and coding scheme was devised to facilitate the card punching directly from the questionnaire.[2]

Sample Population

A sample population of instructors of vocational agriculture, secondary and postsecondary, and county extension agents from both Kansas and Nebraska were chosen. A national sample of experts was also selected. They consisted of college professors who were chairmen of Departments of Agricultural Education and state directors and professors of agricultural extension education. Current personnel lists were numbered consecutively constructing a circular

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[2] See Appendix J for the questionnaire, cover letters, and punching and coding scheme.

list of names. A table of random numbers was used to select each sample.[3]

Administration of the Questionnaire

The questionnaires were mailed to the respondents with a cover letter specifically for each respondent group. The letter also included an endorsement from the State Department of Education, the Department of Agricultural Education and the state leader and/or assistant director of extension.[4] A self-addressed, stamped envelope was enclosed for the return.

A high percentage of the questionnaires from Kansas was returned within two weeks. Eighteen days after the first mailing a follow-up letter was sent to approximately twenty county extension agents, and forty instructors of vocational agriculture in Nebraska, enclosing another questionnaire and a hand written note requesting the return. All questionnaires were coded to facilitate the follow-up. One week after the follow-up letter, telephone calls were placed to fifteen of the instructors of vocational agriculture in Nebraska. No follow-up was necessary for the Kansas respondents or the national sample of college and university professors.

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[3]Allen L. Bernstein, A Handbook of Statistic Solutions for the Behavioral Sciences (New York: Holt, Rinehart and Winston, Inc., 1964), pp. 143-45.

[4]See Appendix K for examples of the letters.

A high rate of return from all groups of respondents was received as illustrated in Table 1.

TABLE 1

Sample Population, Number of Respondents Selected, Percentage of Available Population Sampled, Number and Percentage of Usable Questionnaires Returned

Respondent Group	Questionnaires Mailed		Percentage of Available Population Sampled	Usable Questionnaires Returned	
	Location	Number		Number	Percent
Instructors of vocational agriculture (secondary)	Kansas	60	38	56	93
	Nebraska	60	47	53	88
Instructors of vocational agriculture (postsecondary)	Kansas	26	100	24	92
	Nebraska	31	100	29	94
County extension agents	Kansas	60	63	59	95
	Nebraska	60	74	56	93
College professors and chairmen of agricultural education	USA	30	43	25	83
College professors of extension education and training	USA	30	57	27	90
Totals		357		327	92

The sample population consisted of 357 individuals in five respondent groups. A total of 327 usable questionnaires was used in the study. This was an average of 91.6 percent of all respondents returning the questionnaire.

Descriptive Data About the Sample Population

The age range of respondents is shown in Table 2. It was noted that the county extension agents and postsecondary instructors of vocational agriculture were slightly older than the secondary instructors of vocational agriculture.. The mean average age for all groups was 40 years of age.

The educational attainment of the respondents indicated that all secondary instructors of vocational agriculture and all county extension agents had earned baccalaureate degrees with a majority of them having completed some graduate work.

Nine of the fifty-three postsecondary teachers reported they had less than a baccalaureate degree. Two said they were graduates of a vocational technical school and one had two years of vocational agriculture education at a university. Two postsecondary teachers were doctors of veterinary medicine.

The college professors were nearly identical in educational attainment with the majority having completed the doctorate degree.

Table 3 provides a detailed explanation of educational attainment of each respondent group.

TABLE 2

Age Range of Respondents in Years

Respondent Group	Total Respondents	30 Years	30-39 Years	40-49 Years	50-59 Years	60 Years and Over	Approximate Mean Age in Years
County extension agents	113	24	28	40	19	2	40.7
Instructors of vocational agriculture (secondary)	109	17	13	10	5	0	34.6
Instructors of vocational agriculture (postsecondary)	53	8	19	22	3	1	39.6
College professors and chairmen of agricultural education	25	0	1	8	11	5	52.4
College professors of extension education	27	0	2	16	6	3	48.4
Total	327				Approximate Mean Age		40.0

TABLE 3

Educational Attainment of Respondents

Respondent Group	Respondents	Less Than Baccalaurate	Baccalaurate	Baccalaurate +	Masters	Masters +	Doctorate	Other (Technical Schools, etc.)
County extension agents	113	0	23	38	37	14	1	0
Instructors of vocational agriculture (secondary)	109	0	16	68	12	13	0	0
Instructors of vocational agriculture (post-secondary)	53	9	5	14	5	15	2	3
College professors and chairmen of agricultural education	25	0	0	1	0	6	18	0
College professors of extension education	27	0	0	1	2	6	18	0
Total	327	9	44	122	56	54	39	3

An indication of job tenure is shown in Table 4. Each respondent was asked to indicate the length of time he had been working at his present job; the four categories were (1) less than five years, (2) 6-10 years, (3) 11-20 years, and (4) 21 years or more. County extension agents and college professors of agricultural education indicated slightly longer tenure on their present job than the other groups. Postsecondary instructors of agriculture indicated shorter tenure, which may be due to the recent establishment of postsecondary agriculture programs in Kansas and Nebraska.

Table 5 reveals that about one-third of the respondents had taken college work in agricultural education. Agricultural related areas ranked second. This table provides information concerning the major fields of study completed for each degree.

Each respondent was asked to indicate his previous experience, not including his present job, in the categories of instructor of vocational agriculture at the secondary and postsecondary levels, county extension agent or other experience. The approximate number of years of experience in each area is shown in Table 6.

The respondents who indicated previous experiences in the "other" category listed the following as they were categorized into business or industry experience:

Commercial florist
Construction
Nursery
Chemical Sales and service
Ornamental horticulture
Cattle buyer

TABLE 4

Number of Years Respondents Had Worked At Their Present Job

Respondent Group	Years Worked in Present Position				Total Respondents
	Less Than 5 Years	6-10 Years	11-20 Years	21 or More Years	
County extension agents	37	16	37	23	113
Instructors of vocational agriculture (secondary)	73	14	16	6	109
Instructors of vocational agriculture (postsecondary)	43	9	1	0	53
College professors and chairmen of agricultural education	4	3	10	8	25
College professors of extension education	8	13	6	0	27
Total	165	55	70	37	327

TABLE 5

Respondents' Major Fields of Study

Degree Earned or Now Being Pursued	Agricultural Related	Vocational Agriculture	Extension Education	Non-Agricultural Related	Adult Education	Number Indicating No Study at This Level
Baccalureate	114	188	5	10	1	9
Masters (or work toward a Masters)	40	70	16	19	3	179
Doctorate	4	14	9	10	4	286
Other (such as two year associate degree in agriculture or arts or technical trade school)	0	1	0	8	0	318

N = 327

TABLE 6

Previous Work Experience and Approximate Number of Years at Each Job

Work Experience or Job Category	Total Reporting Experience	Number Reporting by Year			
		0-1 Years	2-5 Years	6-9 Years	10 + Years
Instructor of vocational agriculture (secondary)	112	16	46	22	28
Instructor of vocational agriculture (postsecondary)	17	6	8	1	2
County extension agent	52	5	18	13	16
Other (professional or technical)	43	8	17	9	9
Business or industry	93	14	37	19	23

N = 327

Truck mechanic
Shop foreman
Farmer
Grain buyer
Welder
Implement dealer
Tool and die inspector
Herdsman
Feed salesman

The following were also listed as "other" and were categorized into professional and technical categories:

Veterans on farm training instructor
Science teacher
State supervisor
Elementary principal
School superintendent
Supervisor of production credit association
Chemist
Water resources employee
Park commissioner
Soil conservation service
Department of roads employee
Insurance salesman
Farm manager
Agricultural representative for a bank
Math teacher
U.S. Forest Service employee
Farmers Home Administration employee

Statistical Procedure

The data collected in this study were classified as ordinal because the numerical interval between the measurements of, "not needed for my job," "need to know but not essential," and "essential for my job," would be difficult to ascertain with a cardinal number of 1, 2, 3, . . . N. Therefore, nonparametric measures for determination of statistical significance were chosen to test the null hypothesis that no differences existed in professional competencies needed by

agricultural educators.

The Chi Square test using contingency tables with observed frequencies was chosen. Ferguson suggested when using Chi Square contingency tests that:

> Chi square provides a measure of the discrepancy between the observed cell frequencies and those expected on the basis of their independence. If the value of Chi square is considered significant at some accepted level, . . . we reject the null hypothesis that no difference exists between the observed and expected values.[5]

Expected frequencies are calculated from contingency tables constructed from the observed frequencies. The marginal totals are multiplied and product is divided by the grand total, or N. The formula to calculate the expected frequency is:

$$\text{Expected frequency} = \frac{(\text{Column total})\ (\text{Row total})}{\text{Grand Total}}$$

Summary

This chapter has the development of the study questionnaire, the method and procedures for selecting the sample population, the procedures in mailing, a description of the population, and the statistical procedures used in the analysis of the data.

The sample population consisted of 357 individuals in five different groups in Kansas, Nebraska and the United States. A total

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[5]George A. Ferguson, Statistical Analysis in Psychology and Education (New York: McGraw-Hill Book Company, 1959, 1966), pp. 200-202.

of 327 usable questionnaires was returned. This was a 91.6 percent response for the data used in this study.

CHAPTER IV

FINDINGS

This chapter presents an analysis of the data collected for this study. The presentation has been organized into categories as depicted by the theoretical model.[1] The findings are summarized into groups of professional competencies identified by the analysis of the statistical test used to determine differences. The major groups differentiated by analysis of competencies and identified for each group were as follows:

1. The central core of professional competencies identified as essential for all respondent groups. These were divided into two groups: (1) Those where no significant differences were observed, and (2) those where statistical significances were observed.

2. Professional competencies identified as essential for instructors of secondary vocational agriculture and county extension agents.

3. Professional competencies essential for instructors of secondary vocational agriculture.

4. Professional competencies essential for instructors of vocational agriculture at the secondary and postsecondary level.

5. Professional competencies essential for instructors of postsecondary vocational agriculture.

6. Professional competencies essential for county extension agents.

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[1] See Theoretical model in Chapter I, Figure 1.

7. Professional competencies "Need to know but not essential" for all respondent groups.

8. Professional competencies "Not necessary for my job" for all respondent groups.

The professional competencies have been arranged in the summary tables 7 through 15 and identified individually with a number and letter. The number corresponds to the competency number on the original questionnaire and the letter to the category illustrated on the theoretical model (see page 5). The individual frequency tables in the appendices are also identified with the same numbers and letters.

The ordinal data collected for this type of social science research were analyzed by the use of the Chi Square nonparametric statistical analysis.[2] This analysis provided for a systematic grouping of the data but did not provide for a precise ranking of each competency. The systematic grouping served well for the purpose of this study and complements the theoretical model designed as a basis of this investigation.

The central core of professional competencies identified as essential for all respondent groups is presented in the first section of this chapter. This central core was divided into two parts: those competencies where no statistical significance was observed, and those competencies where statistically significant differences

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[2]See formula in Chapter III, page 38.

were observed. An individual frequency table analysis was used in conjunction with the Chi Square test to verify the selection of each professional competency in the central core group. When a significant difference was observed and the majority of responses appeared in the essential column, the competencies were identified as part of the central core.

Summary tables presented in this chapter were derived from the individual frequency table for each professional competency studied. The individual frequency tables for each competency may be of interest to those who wish to study the frequency responses of each respondent group. They are shown in the appendices (Appendix A through Appendix I).

Due to the nature of the data, statistical significance alone could not be the final criterion of whether to select the competency for the central core. When significance was noted, the frequency tables were reexamined to make the final determination for assigning each competency into a differentiated group or category. Therefore, the professional competencies shown in tables 7 through 15 were differentiated and arranged in the category somewhat dependent on the researchers judgment as each frequency table was analyzed.

Van Dalen and Meyer also pointed out that when Chi Square contingency tables are used and significance is noted, a re-examination of the frequency table is necessary to determine where the differences are found and how to evaluate these differences.[3]

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[3]Deobold B. Van Dalen and William J. Meyer, Understanding Educational Research (New York: McGraw-Hill Book Company, 1967-1968), pp. 409-11.

Individual frequency tables were examined to differentiate between those professional competencies for the central core and those professional competencies identified for the various groups or combinations of groups.

The national sample of college professors and heads of departments of agricultural education and extension education served as a stabilizing influence to assist with the assignment of competencies into specific groups.

Summary of the Central Core

Table 7 provides a summary of those professional competencies identified as essential for all respondent groups. No significant differences were observed when the Chi Square test was applied for this group, indicating that all respondents were in agreement and the null hypothesis was accepted. The competencies are summarized and listed in the categories specified in the theoretical model. Individual frequency tables for this group are found in Appendix A.

Table 8 is a summary of those professional competencies with significant differences that were identified as essential for all respondent groups and part of the central core of competencies. When the Chi Square analysis was applied to the individual competencies summarized in this table, the null hypothesis that no differences existed was rejected. However, as has been suggested, a reexamination of the frequency tables provided evidence that these professional competencies should also be assigned to the central core because the

TABLE 7

Professional Competencies Identified as Essential for All Respondent Groups--"The Central Core" (Competencies Indicating No Significant Differences)

Competency	Frequencies in Each Group: Not Necessary	Need to Know But Not Essential	Essential
Category A: Analysis of the Situation in Your Community			
Ability to:			
29-A* Identify limiting factors which prevent or are in conflict with your educational program.	5	61	261
30-A Identify and co-ordinate with other agencies or groups to prevent duplication of education programs.	5	94	228
Category B: Planning the Educational Program			
Ability to:			
6-B Inform all publics about proposed educational program to maintain public relations.	5	74	248
8-B Utilize advisory group to identify community problems.	3	78	246
11-B Develop annual plan of work or curriculum based and advisory group planing.	8	66	253

TABLE 7 (continued)

Competency	Frequencies in Each Group: Not Necessary	Need to Know But Not Essential	Essential
15-B Organize the facilities needed to carry out an agricultural educational program.	5	34	288
16-B Plan educational program consistent with objectives selected.	2	28	297
Category C: Methods and Techniques			
Knowledge of:			
1-C How adults influence learning and behavior of youth.	5	89	233
4-C How people learn.	3	47	277
6-C The effect motivations have on adult learners.	3	93	231
Ability to:			
20-C Lead small group discussion.	2	74	251
30-C Provide an educational program consistent with occupational opportunities within the community.	5	94	228
34-C Make use of daily, monthly and yearly activity schedules or calendars.	10	87	230
35-C Schedule programs and activities into a timely sequence.	4	62	261

TABLE 7 (continued)

Competency	Frequencies in Each Group: Not Necessary	Need to Know But Not Essential	Essential
36-C Use audiovisual materials and equipment properly.	2	41	284
40-C Provide proper physical environment conducive to learning.	5	70	252
44-C Maintain an adequate reference library.	3	62	262
Category D: Evaluation of the Local Program			
Knowledge of:			
2-D Standards necessary to accomplish intended outcomes.	3	84	240
5-D Whether the goals you are striving to accomplish are the goals of your students or participants or your own goals.	3	51	273
6-D How to obtain the necessary feed back (approval or disapproval from your publics) during each stage of the program.	2	61	264
7-D How to modify the program to maintain focus on the objective rather than let it fail.	1	47	279
Ability to:			
8-D Recognize that some failures are beneficial.	1	88	238
17-D Conduct follow-up studies.	17	144	166

TABLE 7 (continued)

Competency	Frequencies in Each Group: Not Necessary	Need to Know But Not Essential	Essential
18-D Evaluate source and reference materials before using them.	8	71	248
Category E: Re-Analysis of the Local Situation			
Knowledge of:			
2-E How to make comparisons over a period of time to determine what changes have really taken place.	4	63	260
3-E Changes taking place which may alter long and short range objectives.	4	86	237
Ability to:			
7-E Analyze the feedback (public or community acceptance or rejection) about your program outside the educational setting.	6	63	258
9-E Work with advisory and/or planning groups to assist them to keep abreast of the changing situation.	5	62	260
10-E Encourage the planning groups and advisory committees to understand planning is a continuous process.	5	73	249

TABLE 7 (continued)

Competency	Frequencies in Each Group: Not Necessary	Need to Know But Not Essential	Essential
Category F: Personal Characteristics			
Knowledge of:			
1-F How to practice the techniques of good human relations.	1	9	317
2-F Professional ethics and know its influence upon educators.	1	44	282
3-F Continuous study to acquire and use new knowledge is an important part of education.	3	26	298
4-F How to maintain human relations with co-workers.	1	17	309
5-F How to dress for the teaching situation.	2	69	256
6-F How to work closely with supervisory staff for both personal improvement and program improvement.	2	44	281
7-F How to share feeling of others and understand their problem ("put yourself in the other person's shoes").	1	34	292
Ability to:			
9-F Sense the feeling and needs of the people in the community.	2	38	278

TABLE 7 (continued)

Competency	Frequencies in Each Group		
	Not Necessary	Need to Know But Not Essential	Essential
10-F Understand the role of your fellow-workers, teacher aides, and para-professionals.	6	38	283
11-F Understand that communication is a two-way process: talking and attentive listening.	1	12	314

N = 327

*Number of competency as found on questionnaire in Appendix J also corresponds to frequency tables in Appendix A.

TABLE 8

Professional Competencies Identified as Essential for All Respondent Groups--"The Central Core" (Competencies Indicating Statistically Significant Differences)

Competency	Frequencies in Each Group: Not Necessary	Need to Know But Not Essential	Essential
Category A: Analysis of the Situation in Your Community			
Knowledge of:			
10-A* The development of trends of agriculture in the community.	2	39	286
12-A How to acquire adult participation.	6	44	277
14-A Staff and financial resources available.	6	81	240
19-A Principal crops, livestock and other production resources in the community.	1	33	293
Ability to:			
25-A Understand the technological changes in the community.	7	77	243
Category B: Planning the Educational Program			
Ability to:			
1-B Solicit opinions from representative planning and advisory groups.	4	66	256

TABLE 8 (continued)

Competency	Frequencies in Each Group: Not Necessary	Need to Know But Not Essential	Essential
3-B Select and use representative advisory groups.	2	62	263
5-B Organize planning groups and conduct planning activities on continuous basis.	7	85	235
9-B Encourage advisory groups to identify priorities to accomplish goals.	3	88	236
10-B Select the goals the community needs as indicated by priorities identified by the advisory group.	4	101	222
12-B Formulate performance-based objectives congruent with goals.	9	99	219
14-B Formulate objectives so everyone will know when they have been reached.	11	99	217
Category C: Methods and Techniques			
Knowledge of:			
3-C How the attitude of the learner affects the learning process.	2	50	275
5-C How to use verbal and non-verbal reinforcement.	7	61	259

TABLE 8 (continued)

Competency	Frequencies in Each Group: Not Necessary	Need to Know But Not Essential	Essential
7-C The effect that youths' motivations have on learning.	2	63	262
Ability to:			
9-C Use various kinds of questions such as reasoning.	7	67	253
10-C Use various kinds of questions such as judgment.	6	61	260
12-C Involve planning groups and other leaders in implementing the educational program.	2	96	229
13-C Work with existing local organizations to promote educational programs.	5	76	246
14-C Use problem solving teaching techniques such as steps and key points.	8	109	210
19-C Lead large group discussion.	6	95	226
32-C Determine which method to use depending on where the learner is (awareness, interest, appraisal, trial, adoption or integration).	9	81	237

TABLE 8 (continued)

Competency	Frequencies in Each Group		
	Not Necessary	Need to Know But Not Essential	Essential
39-C Plan, organize and conduct field trips with groups or individuals.	1	48	278
54-C Serve as a counselor on an informal basis as the need arises.	7	110	210
55-C Plan and coordinate method demonstrations.	10	113	204
56-C Conduct result demonstrations.	14	104	209
Category D: Evaluation of the Local Program			
Knowledge of:			
1-D Policies and practices which may prevent the accomplishment of the objective.	4	66	257
3-D How to obtain and maintain public support for your program.	1	36	290
4-D Conditions that existed at the time the goals were established.	7	107	213
Ability to:			
13-D Understand and use proper reporting procedures for both local and state evaluation reports.	21	105	201

TABLE 8 (continued)

Competency	Frequencies in Each Group: Not Necessary	Need to Know But Not Essential	Essential
Category E: Re-Analysis of Local Situation			
Knowledge of:			
1-E The consequences of achieving the stated objective.	6	83	238
4-E How to involve planning groups on a continuous basis to provide reliable feedback to a new situation and revised goals.	8	88	231
5-E Whether the educational program has actually provided the knowledge and competencies needed for the participant so he can be successful.	5	69	253
6-E Whether changes in resources within your community have occurred to change the original situation.	7	82	238
Ability to:			
8-E Understand whether the people or students have changed to determine the next step in teaching.	5	78	244

N = 327

*Number of competency as found in questionnaire in Appendix J also corresponds to frequency tables in Appendix B.

majority of all respondents indicated they were essential.

Professional Competencies Identified as Essential for County Extension Agents and Instructors of Secondary Vocational Agriculture

Postsecondary instructors of vocational agriculture were not in agreement that the following group of competencies was essential. It was determined by the significant differences shown and a thorough inspection of the frequency tables that county extension agents and secondary instructors of vocational agriculture responded to the following competencies as essential. The null hypothesis was rejected because differences were identified.

Table 9 summarizes professional competencies for county extension agents and secondary instructors of vocational agriculture. The postsecondary instructors responded with greater frequency to the "need to know but not essential" column for these competencies.

Professional Competencies Identified as Essential for Instructors of Secondary Vocational Agriculture

Four competencies were identified as essential for instructors of secondary vocational agriculture and were rejected by county extension agents and postsecondary instructors of vocational agriculture. A summary of these competencies is shown in Table 10.

TABLE 9

Professional Competencies Identified as Essential for County Extension Agents and Instructors of Secondary Vocational Agriculture

Competency	Frequencies in Each Group: Not Necessary	Need to Know But Not Essential	Essential
Category A: Analysis of the Situation in Your Community			
Knowledge of:			
6-A* The geographic location of ethnic groupings of the people who are living in your community.			
Agents	2	33	78
Secondary	7	26	76
Ability to:			
20-A Secure leaders from all strata in the community.			
Agents	0	10	103
Secondary	1	24	74
21-A Identify all community resources.			
Agents	1	30	82
Secondary	1	41	67
22-A Provide leadership and cooperation through work and planning with special commodity groups in the community.			
Agents	0	42	71
Secondary	4	44	61
27-A Be sensitive to ethnic groups and their needs in your community.			
Agents	3	54	56
Secondary	8	46	55

TABLE 9 (continued)

Competency	Frequencies in Each Group: Not Necessary	Need to Know But Not Essential	Essential
Category C: Methods and Techniques			
Knowledge of:			
2-C How the use of approved practices by youth can influence their parents and be a method of teaching.			
Agents	2	36	75
Secondary	1	28	80

N = Extension Agents 113
Secondary Instructors 109

*Number of competency as found in questionnaire in Appendix J also corresponds to frequency tables in Appendix C.

TABLE 10

Professional Competencies Identified as Essential for Instructors of Secondary Vocational Agriculture

Competency	Frequencies in Each Group: Not Necessary	Need to Know But Not Essential	Essential
Category A: Analysis of the Situation in Your Community			
Knowledge of:			
5-A* Your relationship with the State Department of the U.S. Office of Education.	1	38	70
Ability to:			
26-A Identify the handicapped and disadvantaged persons in the community to provide special emphasis and programs.	6	30	73
Category B: Planning the Educational Program			
Ability to:			
4-B Plan programs for disadvantaged and handicapped.	10	47	52
Category D: Methods and Techniques			
Ability to:			
28-D Use and teach basic parliamentary procedure skills.	0	22	87

N = 109

*Number of competency as found in questionnaire in Appendix J also corresponds to frequency tables in Appendix D.

Professional Competencies Identified as Essential for Secondary and Postsecondary Instructors of Vocational Agriculture

The professional competencies identified as essential for secondary and postsecondary instructors of vocational agriculture are summarized in Table 11. The professional competencies identified in this section indicate significant differences and do not fit into the central core needed by all agricultural educators. They have been identified especially for those instructors in the formal school setting, namely, secondary and postsecondary instructors of vocational agriculture. The null hypothesis was rejected because differences were identified. County extension agents responded to many of the competencies in this group as "need to know but not essential."

Professional Competencies Identified as Essential for Instructors of Postsecondary Agriculture

Two competencies were identified as essential for instructors of postsecondary vocational agriculture. They are summarized in Table 12. Both competencies were from the methods and techniques category. County extension agents responded with "not necessary," while secondary vocational agriculture instructors indicated "need to know but not essential" for these competencies.

Professional Competencies Identified as Essential for County Extension Agents

A number of professional competencies was identified and indicate special needs of county extension agents. They were from all

TABLE 11

Professional Competencies Identified as Essential for Secondary and Postsecondary Instructors of Vocational Agriculture

Competency	Frequencies in Each Group: Not Necessary	Need to Know But Not Essential	Essential
Category A: Analysis of the Situation in Your Community			
Ability to:			
23-A* Understand employment opportunities of employment patterns within the community.			
Secondary	0	29	80
Postsecondary	0	14	39
Category C: Methods and Techniques			
Ability to:			
8-C Use various kinds of questions such as memory questions.			
Secondary	4	30	75
Postsecondary	0	11	42
11-C Use various kinds of questions such as creative thinking.			
Secondary	0	18	91
Postsecondary	0	7	46
15-C Use various kinds of problem-solving teaching methods such as possibilities and factors.			
Secondary	0	31	78
Postsecondary	0	17	36

TABLE 11 (continued)

Competency	Frequencies in Each Group: Not Necessary	Need to Know But Not Essential	Essential
16-C Use various kinds or problem-solving techniques such as, advantages and disadvantages.			
Secondary	0	23	86
Postsecondary	0	13	40
17-C Use various kinds of problem-solving teaching methods such as, present situation compared to ideal situation.			
Secondary	0	30	78
Postsecondary	0	13	40
18-C Use of various kinds of problem-solving teaching methods such as, question-answer discussion.			
Secondary	1	23	86
Postsecondary	0	7	46
21-C Construct and use various kinds of tests such as true-false.			
Secondary	1	28	80
Postsecondary	5	13	35
22-C Construct and use various kinds of tests such as matching questions.			
Secondary	1	24	84
Postsecondary	1	13	39
23-C Construct and use various kinds of tests such as short answer.			
Secondary	0	29	80
Postsecondary	0	14	39

TABLE 11 (continued)

Competency	Frequencies in Each Group		
	Not Necessary	Need to Know But Not Essential	Essential
24-C Construct and use various kinds of tests such as multiple choice.			
Secondary	1	28	80
Postsecondary	1	11	41
25-C Construct and use various kinds of tests such as essay.			
Secondary	2	32	75
Postsecondary	1	10	42
33-C Arrange a schedule of work experiences for the learner.			
Secondary	4	27	78
Postsecondary	1	15	37
37-C Recognize each student's or person's background and experience during the learning situation.			
Secondary	3	13	93
Postsecondary	0	8	45
38-C Prepare units and materials for teaching.			
Secondary	0	5	104
Postsecondary	0	3	50
50-C Maintain discipline during teaching-learning situations.			
Secondary	2	4	103
Postsecondary	0	5	48
57-C Present a shop demonstration (agricultural mechanics).			
Secondary	0	12	97
Postsecondary	10	17	26

TABLE 11 (continued)

Competency	Frequencies in Each Group: Not Necessary	Need to Know But Not Essential	Essential
59-C Coordinate and supervise occupational experience programs for students.			
Secondary	6	29	74
Postsecondary	3	21	29
Category D: Evaluation of Local Program			
Ability to:			
11-D Arrive at an objective evaluation or grades to determine student performance.			
Secondary	1	15	93
Postsecondary	1	8	44
12-D Plan evaluation devices and systems appropriate to measure whether the educational program has been successful.			
Secondary	3	26	80
Postsecondary	0	10	43
15-D Use cumulative records or checklists to measure progress of students or programs.			
Secondary	4	40	65
Postsecondary	3	22	28

N = Secondary 109
Postsecondary 53

*Number of competency as found in questionnaire in Appendix J also corresponds to frequency tables in Appendix E.

TABLE 12

Professional Competencies Identified as Essential for Instructors of Postsecondary Agriculture

Competency	Frequencies in Each Group: Not Necessary	Need to Know But Not Essential	Essential
Category D: Methods and Techniques			
Ability to:			
26-D* Use standardized test results.	6	20	27
49-D Take pictures for use as slide sets for teaching.	0	15	38

N = 53

*Number of competency as found on questionnaire in Appendix J also corresponds to frequency tables in Appendix F.

categories except the re-analysis of the local situation where all the competencies were identified as central core. It can be noted that the difference is highly significant, and the null hypothesis was rejected. However, many of these competencies could also be identified as "need to know but not essential" for the instructors of postsecondary and secondary vocational agriculture.

Table 13 provides a summary of those competencies identified as significant for county extension agents.

Professional Competencies Identified by All Respondent Groups as "Need to Know But Not Essential"

A group of nineteen professional competencies was identified as "need to know but not essential" for all respondent groups. Significant differences were indicated by the Chi Square test for all except two of these competencies. The null hypothesis was rejected for these competencies. The differences were due to greater than expected responses in the "need to know but not essential" column. Two competencies where no significant differences were observed indicated all respondent groups were in agreement that those competencies were in the "need to know but not essential" column and the null hypothesis was accepted.

Table 14 provides a summary of those professional competencies that were identified in the "need to know but not essential" column for all respondent groups.

TABLE 13

Professional Competencies Identified as Essential for County Extension Agents

Competency	Frequencies in Each Group: Not Necessary	Need to Know But Not Essential	Essential
Category A: Analysis of the Situation in Your Community			
Knowledge of:			
1-A* The organizational structure and legal basis that governs the agency for which you work.	1	21	91
2-A History, objectives, and organization of the agency for which you work.	0	46	67
3-A Your relationship with all the various departments within the land grant university.	3	43	67
4-A Your relationship to the land grant college and the U.S. Department of Agriculture.	0	29	84
7-A The status dimension, class differences and social strata of the people in the community.	4	44	65
9-A Who makes the important decisions in the community (power structure)	0	33	80

TABLE 13 (continued)

Competency	Frequencies in Each Group: Not Necessary	Need to Know But Not Essential	Essential
13-A The role or function of other existing agencies in your community such as schools, churches, recreational facilities, health services, government agencies, etc.	0	46	67
Ability to:			
28-A Interpret local and national surveys and research findings for local application.	6	44	63
Category B: Planning the Educational Program			
Ability to:			
2-B Present data about your community to planning groups.	0	18	95
7-B Summarize the facts and background information and relate them to the local community.	0	34	79
Category C: Methods and Techniques			
Ability to:			
27-C Train local leaders so they can assist with local educational programs.	3	18	92
29-C Work effectively with large groups in informal programs for public meetings.	0	24	89

TABLE 13 (continued)

Competency	Frequencies in Each Group: Not Necessary	Need to Know But Not Essential	Essential
41-C Organize and conduct field days to explain the results of approved practices to the public.	0	21	92
42-C Maintain an office with regular hours and adequate materials to meet public demands.	0	4	109
45-C Provide a systematic news and information program for all local media to reach all segments of the community (newspaper, radio, television, etc.).	0	13	100
Category D: Evaluation of Local Program			
Ability to:			
16-D Make annual reports to the public.	2	33	78
Category F: Personal Characteristics			
Ability to:			
8-F Delegate authority to co-workers on your staff.	1	10	102

N = 113

*Number of competency as found in questionnaire in Appendix J also corresponds to frequency tables in Appendix G.

TABLE 14

Professional Competencies Identified as "Need to Know But Not Essential" for All Respondent Groups

Competency	Frequencies in Each Group: Not Necessary	Need to Know But Not Essential	Essential
Category A: Analysis of the Situation in Your Community			
Knowledge of:			
8-A* The interrelationships of the small community groups to the large community or trade area.	25	166	136
11-A The trend of how agricultural adult education has developed over the years.	21	189	117
15-A The historical background of the community or area.	38	218	71
16-A The income variations of the people within the community (degree of wealth or poverty).	32	169	126
18-A The degree of mobility of the community.	55	193	79
Ability to:			
24-A Understand the population fluctuations and trends within the community.	26	176	125
31-A Conduct a community survey and organize the data for community needs analysis.	31	174	122

TABLE 14 (continued)

Competency	Frequencies in Each Group: Not Necessary	Need to Know But Not Essential	Essential
32-A Work with differentiated staff patterns and para-professionals.	30	163	134
33-A Use the scientific method to determine the situation (data collection through interpretation and reporting).	39	163	125
Category B: Planning the Educational Program			
Ability to:			
13-B Develop the components of a behavioral objective.	18	150	159
Category C: Methods and Techniques			
Ability to:			
31-C Practice the skills of group dynamics for teaching in informal groups.	13	134	180
43-C Use programmed materials for individualized learning situations.	27	159	141
46-C Present regularly scheduled radio programs as part of the educational program (at least a weekly program).	90	165	72

TABLE 14 (continued)

Competency	Frequencies in Each Group: Not Necessary	Need to Know But Not Essential	Essential
48-C Take pictures for all types of mass media.	54	167	106
51-C Plan and construct public educational displays.	23	155	149
52-C Prepare the art work and make up an exhibit.	83	192	52
58-C Use the dictionary of occupational titles.	87	173	67
Category D: Evaluation of Local Program			
Ability to:			
9-D Construct and use a performance evaluation instrument.	25	155	147

N = 327

*Number of competency as found in questionnaire in Appendix J also corresponds to frequency tables in Appendix H.

Professional Competencies Identified "Not Necessary for Their Job"

Five professional competencies were identified as not necessary for my job based on the responses of the respondent groups. Some would suggest the data may support that these competencies should have been placed in the "need to know but not essential" group. However, a careful reexamination of the frequency tables provided evidence that these competencies were "not necessary for my job" for the respondents in this study. The differences were statistically significant and the null hypothesis was rejected.

Table 15 summarizes those professional competencies identified as "not necessary for my job."

TABLE 15

Professional Competencies Identified as "Not Necessary for Their Job"

Competency	Frequencies in Each Group: Not Necessary	Need to Know But Not Essential	Essential
Category A: Analysis of the Situation in Your Community			
Knowledge of:			
17-A* How long people have lived in the community.	101	195	31
Category C: Methods and Techniques			
Ability to:			
47-C Present regularly scheduled television programs as a regular part of the educational program (at least a monthly program).	133	160	34
53-C Write educational bulletins and other educational materials.	103	160	64
Category D: Evaluation of Local Program			
Ability to:			
10-D Select and administer the proper standardized tests.	128	149	50

TABLE 15 (continued)

Competency	Frequencies in Each Group		
	Not Necessary	Need to Know But Not Essential	Essential
14-D Apply statistical procedures when interpreting evaluative data.	74	168	85

N = 327

*Number of competency as found in questionnaire in Appendix J also corresponds to frequency tables in Appendix I.

Summary of Findings

There are many similarities of professional competencies essential for instructors of secondary and postsecondary vocational agriculture and county extension agents. Seventy-four professional competencies were identified and differentiated as a central core of competencies essential for all respondent groups studied. These competencies were:

Category A - Analysis of the Situation in Your Community

Knowledge of

The development of trends of agriculture in the community

How to acquire adult participation

Staff and financial resources available

Principal crops, livestock and other production resources in the community

Ability to

Identify limiting factors which prevent or are in conflict with your educational program

Identify and coordinate with other agencies or groups to prevent duplication of education programs

Understand the technological changes in the community

Category B - Planning the Educational Program

Ability to

Inform all publics about proposed educational program to maintain public relations

Utilize advisory group to identify community problems

Develop annual plan of work or curriculum based and advisory group planning

Organize the facilities needed to carry out an agricultural educational program

Plan educational program consistent with objectives selected

Solicit opinions from representative planning and advisory groups

Select and use representative advisory groups

Organize planning groups and conduct planning activities on continuous basis.

Encourage advisory groups to identify priorities to accomplish goals

Select the goals the community needs as indicated by priorities identified by the advisory group

Formulate performance-based objectives congruent with goals

Formulate objectives so everyone will know when they have been reached

Category C - Methods and Techniques

Knowledge of

How adults influence learning and behavior of youth

How people learn

The effect motivations have on adult learners

How the attitude of the learner affects the learning process

How to use verbal and non-verbal reinforcement

The effect that youths' motivations have on learning

Ability to

Lead small group discussion

Provide an educational program consistent with occupational opportunities within the community

Make use of daily, monthly and yearly activity schedules or calendars

Schedule programs and activities into a timely sequence

Use audiovisual materials and equipment properly

Provide proper physical environment conducive to learning

Maintain an adequate reference library

Use various kinds of questions such as reasoning

Use various kinds of questions such as judgment

Involve planning groups and other leaders in implementing the educational program

Work with existing local organizations to promote educational programs

Use problem solving teaching techniques such as steps and key points

Lead large group discussion

Determine which method to use depending on where the learner is (awareness, interest, appraisal, trial, adoption or integration)

Plan, organize and conduct field trips with groups or individuals

Serve as a counselor on an informal basis as the need arises

Plan and coordinate method demonstrations

Conduct result demonstrations

Category D - Evaluation of the Local Program

Knowledge of

Standards necessary to accomplish intended outcomes

Whether the goals you are striving to accomplish are the goals of your students or participants or your own goals

How to obtain the necessary feed back (approval or disapproval from your publics) during each stage of the program

How to modify the program to maintain focus on the objective rather than let it fail

Policies and practices which may prevent the accomplishment of the objective

How to obtain and maintain public support for your program

Conditions that existed at the time the goals were established

Ability to

Recognize that some failures are beneficial

Conduct follow-up studies

Evaluate source and reference materials before using them

Understand and use proper reporting procedures for both local and state evaluation reports

Category E - Re-Analysis of the Local Situation

Knowledge of

How to make comparisons over a period of time to determine what changes have really taken place

Changes taking place which may alter long and short range objectives

The consequences of achieving the stated objective

How to involve planning groups on a continuous basis to provide reliable feedback to a new situation and revised goals

Whether the educational program has actually provided the knowledge and competencies needed for the participant so he can be successful

Whether changes in resources within your community have occurred to change the original situation

Ability to

Analyze the feedback (public or community acceptance or rejection) about your program outside the educational setting

Work with advisory and/or planning groups to assist them to keep abreast of the changing situation

Encourage the planning groups and advisory committees to understand planning is a continuous process

Understand whether the people or students have changed to determine the next step in teaching

Category F - Personal Characteristics

Knowledge of

How to practice the techniques of good human relations

Professional ethics and know its influence upon educators

Continuous study to acquire and use new knowledge is an important part of education

How to maintain human relations with co-workers

How to dress for the teaching situation

How to work closely with supervisory staff for both personal improvement and program improvement

How to share feeling of others and understand their problem ("put yourself in the other person's shoes")

Ability to

Sense the feeling and needs of the people in the community

Understand the role of your fellow-workers, teacher aides, and para-professionals

Understand that communication is a two-way process: talking and attentive listening

The data presented as based upon the statistical analysis identified 39 professional competencies as essential for all respondent groups. These were identified as part of the central core. No statistical difference was found at the .05 level when the Chi Square test for differences was applied. This indicated that all respondent groups agreed and the

null hypothesis was accepted. There were no differences in the professional competencies needed by instructors of vocational agriculture at the secondary and postsecondary levels and county extension agents for this group of competencies.

Another group of 35 professional competencies was also identified as central core competencies; however, significant differences were found when the Chi Square statistical test was applied. The null hypothesis was rejected on the basis of the statistical test. However, an analysis of the individual frequency tables provided evidence that this group of competencies should also be designated as essential for all respondent groups and these competencies were placed in the central core. The reexamination of the frequency tables indicated that many contained greater than expected frequencies in the "essential for my job" cell. This substantiated the decision for placement of a number of competencies in the central core, even though significant statistical differences were noted. The college professors of agricultural education and extension education also responded with greater than expected frequency to the "essential for my job" cells. Their responses were used as a guiding influence for the final identification throughout the study. Their responses to the "essential for my job" cells also contributed to the statistical differences encountered.

There were six professional competencies identified with similarities and differentiated into a group of essential competencies for county extension agents and instructors of secondary vocational agriculture. Significant differences were the basis for rejection of the null hypothesis for all the competencies in this group.

A group of four competencies was identified as essential only for instructors of secondary agriculture. County extension agents and postsecondary instructors of vocational agriculture responded with greatest frequency to the "need to know but not essential" column. This accounted for the differences and rejection of the null hypothesis.

Instructors of secondary and postsecondary vocational agriculture responded to the essential column to differentiate 21 professional competencies especially for their groups. County extension agents responded to the "need to know but not essential" column, indicating significant differences to reject the null hypothesis.

Only two professional competencies were identified as essential specifically for instructors of postsecondary vocational agriculture. The statistical significant differences provided evidence for the rejection of the null hypothesis.

There were 16 professional competencies identified as essential for county extension agents. Instructors of secondary and postsecondary vocational agriculture responded to the "need to know but not essential" column, providing evidence to substantiate the significant differences noted and rejection of the null hypothesis.

A total of 19 professional competencies was selected for a special category of competencies common to all respondent groups. This group has been identified as "need to know but not essential for my job." All except two of these competencies reflected significant differences when the null hypothesis was tested. A careful examination

of the individual frequencies provided evidence the significance could be attributed to the varying responses of all groups to the "need to know but not essential" and the "not necessary for my job" columns.

The final group of professional competencies, identified with the aid of the statistical test and re-analysis of each frequency table, contains five competencies. All respondent groups generally agreed that these competencies were not necessary for their job. There was considerable variation in the respondents, indicated when the null hypothesis was tested and significance was determined. The null hypothesis was rejected and the competencies were identified as "not necessary for my job."

CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

This chapter presents a summary of the study, conclusions reached from the data summarized in Chapter IV, and recommendations and implications for further study.

Summary

Purpose

The purpose of this study was to identify a common core of professional competencies essential for instructors of secondary and postsecondary vocational agriculture and county extension agents. It was also designed to differentiate those professional competencies needed by the various individual groups of agricultural educators.

Need for the Study

The need for the study was based upon the fact that many college preparation programs for instructors of vocational agriculture at the secondary level, instructors of postsecondary agriculture and county extension agents have assumed that professional competencies essential for these occupations are the same. Knowledge of professional competencies essential for all groups and those essential for each individual group may be helpful when planning courses and course content for undergraduate and graduate preparation programs. New legislation and changing local needs provided evidence that a study was needed.

Theoretical Model and Hypothesis

The theoretical model designed to study and identify the professional competencies essential for the job as a county extension agent, or an instructor of secondary or postsecondary vocational agriculture provided a framework for the study.[1]

The hypothesis that no differences existed in the professional competencies needed by county extension agents, instructors of secondary vocational agriculture and instructors of agriculture at the postsecondary or technical level was tested. This provided a basis for identification and differentiation of professional competencies essential for each group and combinations of groups.

Design and Procedure

The study sample included 357 randomly selected respondents. One hundred twenty instructors of secondary vocational agriculture in Kansas and Nebraska; 120 county extension agents from Kansas and Nebraska; 57 postsecondary instructors of agriculture for Kansas and Nebraska; and 60 college and university professors of Departments of Agricultural Education and Extension Education were randomly selected and composed the study sample.

The study questionnaire was developed from a review of literature, personal experiences, suggestions from Departments of Agricultural Education, a national jury of experts, pilot interviews of agricultural educators in both Nebraska and Kansas and a trial sample of agricultural educators and local advisors at the University. The

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[1] See Figure 1, Chapter I.

questionnaire was mailed with a cover letter and a stamped, self-addressed envelope.

Each respondent was asked to indicate on the study questionnaire whether the professional competency was (1) essential for my job, (2) needed but not essential, or (3) not necessary for my job. Frequencies were tabulated and the Chi Square statistical test was applied to test the null hypothesis for all respondent groups. Statistically significant differences were evaluated for each competency. A re-examination of the frequency table for each professional competency provided evidence for identification and differentiation for the assignment of each competency into its respective group.

Organization of Summary Data

The null hypothesis was tested for each professional competency with the Chi Square test for significance. The test provided evidence that the competencies could be differentiated to establish the following groups of professional competencies:

1. The central core for all respondent groups: (a) those without statistically significant differences and (b) those with statistically significant differences.

2. County extension agents and secondary instructors of vocational agriculture.

3. Secondary instructors of vocational agriculture.

4. Secondary and postsecondary instructors of vocational agriculture.

5. Postsecondary instructors of vocational agriculture.

6. County extension agents.

7. The "need to know but not essential" group.

8. The "not necessary for my job" for any group.

Conclusions and Implications

1. There were 74 professional competencies identified and differentiated as a central core of competencies essential for all respondent groups studied. These competencies were identified from all the categories within the model. This indicated that there are many similarities of professional competencies essential for instructors of secondary and postsecondary vocational agriculture and county extension agents.

2. There were six professional competencies identified as essential for county extension agents and instructors of secondary vocational agriculture in addition to the central core. The major differences not considered essential by postsecondary instructors included: working with community groups, recognizing ethnic groups, leadership training, and encouraging youth to use approved practices as a method of teaching adults.

3. Instructors of secondary agriculture selected four professional competencies essential specifically for their group. Their response indicated the need to work with the disadvantaged and handicapped and use of parliamentary procedure as the major difference. These responses indicated their concerns consistent with the 1968 Vocational Amendments.

4. Instructors of secondary and postsecondary vocational agriculture responded to 21 professional competencies, in addition to the central core, as essential for both groups. Their needs included: the use of tests, grades, discipline, shop demonstrations, occupational experience programs, classroom problem solving techniques, and knowledge of employment opportunities for their students. This indicated there is considerable similarity among the secondary and postsecondary teachers of vocational agriculture.

5. Postsecondary instructors of vocational agriculture selected only two professional competencies that were specific for their work. These were: use of standardized tests and taking photographs for making slide sets for teaching. The standardized test may have been used to assist their students with employment and the need for slide sets indicated that materials for technical and postsecondary teaching in vocational agriculture may not be readily available to the teacher and he may need to make his own. Most of the postsecondary needs were combined in the central core and with the secondary instructors.

6. County extension agents responded with preference to 16 professional competencies in addition to those in the central core and with the secondary vocational instructors. Those competencies of special concern for extension agents indicated major emphasis in the areas of: analysis of the community situation, the history and organization of extension service, relationship with other departments within the university, understanding the power structure, the role and

function of institutions and agencies in the community, translating research to the people, using background material with planning groups, working with large groups, conducting field days, maintaining a news and information program and delegating authority to co-workers.

7. Instructors of secondary and postsecondary vocational agriculture felt that classroom methods and techniques were more essential, while county extension agents gave higher priority to community planning and analysis and informal methods.

8. County extension agents did not respond as positively to several competencies as was expected by the researcher. They indicated the ability to understand and use proper reporting procedures for both local and state evaluation reports and knowledge of whether the educational program had actually provided the knowledge and competencies needed for the participant so he could be successful was "not necessary." This may imply a lack of knowledge and accountability by county extension agents in two relatively important areas.

9. The postsecondary instructors of agriculture did not seem as concerned about the sociological aspects of their community which implied that the more technical the job the less concern there is for community involvement. It may also imply that there is less concern with the community because the skills taught at the postsecondary schools are more of statewide, regional or national scope and not so much for local employment needs.

10. There was some indication that the section listing those competencies "need to know but not essential" may have been interpreted, "nice to know but not necessary for my job at this time." In some cases the respondents may not have had the experience or knowledge to understand the meaning of such techniques as individualized programmed learning, use of differentiated staffing patterns and paraprofessionals.

This study did provide evidence that there is a central core of professional competencies essential for instructors of secondary vocational agriculture, instructors of postsecondary agriculture, and county extension agents. The study also provided evidence that there are some significant differences in professional competencies needed by these agricultural educators.

The statistical procedures used to determine significant differences between the responses of the study questionnaire did not permit the competencies to be arranged into a rank order classification. The ordinal type data derived from the Likert-type measurement prevented an exact measurement; however, the theoretical model derived for the study and the hypothesis used to test the data accomplished the purpose the study was designed to achieve. The theoretical model indicated there are some overlapping areas in each category with implications the overlapping may also occur among the various respondent groups.

Recommendations for Further Study

This study has stimulated some interesting possibilities for further study:

1. Professional competency studies tend to impose long lists of competencies for reaction or rating by a respondent. This may imply that a checklist-type questionnaire may not be the most satisfactory method to collect the necessary data. A Q-sort or card sort method with a personal interview would tend to be more reliable. This type of methodology would be governed by the resources available to the investigator.

2. No attempt was made to determine the respondents' rating of how competent they felt they were for each competency rated as essential or not essential for the job. A self-rating may provide an excellent inservice needs survey.

3. A study to determine when and how the competencies identified should be included in the training program may be necessary to implement the results of this investigation. It would be necessary to determine whether the preservice, inservice, induction or experience-type training program would be most effective.

4. Additional research may provide a means for using the competencies identified to construct a standardized test as the determination of whether an individual can perform a specific job without completing a traditional block of college credit hours.

5. The competencies identified in this study may be used to develop a study or test to determine how well a student is prepared to perform a job in agricultural education. It may also be the basis for a study to determine whether advanced degrees provide more competent professional agricultural educators than those with undergraduate degrees only, or those trained on-the-job and combined with inservice programs.

BIBLIOGRAPHY

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A. BOOKS

Amidon, Edmund and Elizabeth Hunter. Improving Teaching, The Analysis of Classroom Verbal Interaction. New York: Holt, Rinehart and Winston, 1966.

Bernstein, Allen L. A Handbook for Statistic Solutions for the Behavioral Sciences. New York: Holt, Rinehart and Winston, 1964.

Ferguson, George A. Statistical Analysis in Psychology and Education. New York: McGraw Hill Book Company, 1959.

Kelsey, David Lincoln and Cannon Childs Hearne. Cooperative Extension Work. Ithaca, New York: Comstock Publishing Associates, 1960.

Lippitt, Ronald and others. The Dynamics of Planned Change. New York: Harcourt, Brace and World, Inc., 1958.

Mager, Robert F. and Kenneth M. Beach, Jr. Developing Vocational Instruction. Palo Alto, California: Fearon Publishers, 1967.

Saylor, Galen J. and William M. Alexander. Curriculum Planning for Modern Schools. New York: Holt, Rinehart and Winston, 1966.

Swanson, George I. and Edgar Persons. "Agricultural Education," Encyclopedia of Educational Research, ed. Robert L. Ebel. 4th ed.; London: The Macmillan Company, Collier Macmillan, Ltd., 1969.

Van Dalen, Deobold B. and William J. Meyer. Understanding Educational Research. New York: McGraw Hill Book Company, 1967-1968.

B. GOVERNMENT DOCUMENTS

Houle, Cyril. Some Essentials in Program Development. Cooperative Extension Administration Report of Fifth National Administrative Workshop. Madison, Wisconsin: National Agricultural Extension Center for Advanced Study, University of Wisonsin, 1956.

Joint USDA-NASULGC Study Committee on Cooperative Extension. A People and a Spirit. Fort Collins, Colorado: Colorado State University Publication Service, 1968.

Public Law 347, 64th Congress (Smith-Hughes Act), February 23, 1917.

Public Law 702, 70th Congress (George-Reed Act), February 5, 1929.

Public Law 245, 73rd Congress (George-Ellzey Act), May 21, 1934.

Public Law 673, 74th Congress (George-Deen Act), June 8, 1936.

Public Law 586, 79th Congress (George-Barden Act), August 1, 1946.

Public Law 83, 83rd Congress (Amended Amith-Level Act), in Appendix 1, Kelsey and Hearne, Cooperative Extension Work. New York: Comstock Publishing Associates, 1963.

Public Law 88-210, 88th Congress (Vocational Education Act of 1963), December 18, 1963.

Schalock, H. Del (ed.). A Competency Based, Personalized and Field Centered Model of An Elementary Teacher Education Program. Nine program models submitted to the U.S. Office of Education. Washington, D.C.: The U.S. Government Printing Office, E.S. 5 258 58033, 1969.

Schalock, H. Del and James R. Hole (eds.). A Competency Based, Field Centered, Systems Approach to Elementary Teacher Education. Vol. I, Final Report. Washington, D. C.: U.S. Government Printing Office, 1970.

U.S. Department of Health, Education and Welfare. Analytic Summaries of Specifications for Model Teacher Education Programs. Washington, D.C.: U.S. Government Printing Office, 1970.

U.S. Department of Health, Education and Welfare (comp.). The Vocational Education Act of 1963. Washington, D.C.: U.S. Government Printing Office, 1965.

U.S. Office of Education. Administration of Vocational Education. Bulletin No. 1. Washington, D.C.: Government Printing Office, 1948.

U.S. Superintendent of Documents (comp.). Vocational Education: The Bridge Between Man and His Work. Summary and Recommendations of the National Advisory Council. Catalog No. F. S. 5.280:80053. Washington, D.C.: U.S. Government Printing Office, 1968.

C. PERIODICALS

Bail, Joe P. "Teachers Evaluate Their Preparation," The Agricultural Education Magazine, XXVI (Mary, 1954).

Cunningham, Clarence J. "Improving Instruction," Journal of Co-operative Extension, V (Spring, 1967).

Garris, E. Q. "Supervisory Needs of Beginning Teachers," The Agricultural Education Magazine, XXV (April, 1953).

Herr, Robert D. "The Role of the Vo-Ag Teacher in Occupational Guidance," The Agricultural Education Magazine, XXXI (April, 1959).

Knowles, Malcolm S. "What Does Graduate Study in Adult Education Offer?" The Agricultural Education Magazine, XIV (January, 1963).

Macmillion, Martin B. "Teacher Education for Post-High School," The Agricultural Education Magazine, XLII (January, 1970).

Timbers, Edwin. "Defining Training Need," Training Directors Journal, XIX (February, 1965).

Thompson, O. E. "Agricultural Education in 1980--A Look into the Future," The Agricultural Education Magazine, XLII (July, 1969).

Woodin, Ralph J. "Common Competencies for all Vocational Teachers," The Agricultural Education Magazine, XXXVII (February, 1965).

D. UNPUBLISHED WORKS

Feck, Vincent Joseph. "Characteristics and Professional Competency Needs of Teachers of Agriculture in Two Year Technical Institutes or Colleges in the United States." Unpublished Doctor's dissertation, The Ohio State University, 1971.

Horner, James T. "Challenges for the Seventies in Vocational Education." Address presented to Agricultural Section of the American Vocational Association Conference, December 8, 1967, Cleveland, Ohio.

Miller, James Arthur. "Functional Competencies Needed by Industrial Arts Instructors to Adequately Perform in Contemporary Industrial Arts Laboratory/Classrooms." Unpublished Doctor's dissertation, University of Northern Colorado, 1971.

Peterson, Roland L. and Dale G. Zikmund. "An Evaluation of Selected Behaviors of First Year Vocational Agriculture Teachers in Nebraska Public Secondary Schools." Unpublished research, departmental report, University of Nebraska, 1970.

Price, Randel K. "An Analysis of Educational Needs of Arkansas Extension Agents." Unpublished Doctor's dissertation, University of Wisconsin, 1960.

Ruf, William Adolph. "Development of the Agricultural Programs at the Willmar Area University." Unpublished Master's thesis, University of Minnesota, St. Paul, 1970.

Ryden, Einar R. "Designing a Staff Development Procedure." Report presented at Cornell University, Ithaca, New York, 1969. (Mimeographed.)

APPENDIX A

Central Core of Competencies Identified as Essential for All Respondent Groups (No Significant Differences Noted When the Null Hypothesis Was Tested)

Table 29-A indicates that all respondent groups were in agreement that the ability to identify the limiting factors which prevent or are in conflict with the educational program is essential. The null hypothesis was accepted.

Table 29-A

Category: Analysis of the Situation in Your Community

Identify the limiting factors which prevent or are in conflict with your educational programs

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	1	19	93
Instructors of vocational agriculture (secondary)	2	23	84
Instructors of vocational agriculture (postsecondary)	1	13	39
College professors, agricultural education	1	5	19
College professors, extension education	0	1	26
N=327 Total	5	61	261

$\chi^2 = 8.04$. Not significant at .05.

Table 30-A also shows that all respondents agree that the ability to coordinate with other agencies or groups to prevent duplication of educational programs was essential. The null hypothesis was accepted.

Table 30-A

Category: Analysis of the Situation in Your Community

Identify and coordinate with other agencies or groups to prevent duplication of educational programs

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	1	33	79
Instructors of vocational agriculture (secondary)	2	34	73
Instructors of vocational agriculture (postsecondary)	2	15	36
College professors, agricultural education	0	6	19
College professors, extension education	0	6	21
N=327 Total	5	94	228

$\chi^2 = 4.29$. Not significant at .05.

Table 6-B indicates that all respondent groups responded to near normal expected frequencies and the ability to inform all publics about the proposed educational programs was essential for all. The null hypothesis was accepted that no differences existed.

Table 6-B

Category: Planning the Educational Program

Inform all publics about proposed educational programs to maintain public relations

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	1	23	89
Instructors of vocational agriculture (secondary)	3	27	79
Instructors of vocational agriculture (postsecondary)	1	19	33
College professors, agricultural education	0	2	23
College professors, extension education	0	3	24
N=327 Total	5	74	248

$\chi^2 = 13.78$. Not significant at .05.

Table 8-B provides evidence that all respondent groups were in agreement that the ability to utilize advisory groups to identify pertinent community problems was essential. For this reason the null hypothesis was accepted.

Table 8-B

Category: Planning the Educational Program

Utilize the advisory group to identify the problems pertinent to the community

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	0	23	90
Instructors of vocational agriculture (secondary)	3	33	73
Instructors of vocational agriculture (postsecondary)	0	13	40
College professors, agricultural education	0	5	20
College professors, extension education	0	4	23
N=327 Total	3	78	246

$\chi^2 = 11.27$. Not significant at .05.

Table 11-B provides evidence that all respondent groups were in agreement that the ability to develop an annual plan of work and curriculum based on advisory group planning was essential and the null hypothesis was accepted.

Table 11-B

Category: Planning the Educational Program

Develop an annual plan of work or curriculum based on advisory group planning

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	4	23	86
Instructors of vocational agriculture (secondary)	4	26	79
Instructors of vocational agriculture (postsecondary)	0	13	40
College professors, agricultural education	0	1	24
College professors, extension education	0	3	24
N-327 Total	8	66	253

$\chi^2 = 11.33$. Not significant at .05.

Table 15-B indicates that all respondent groups agreed that the ability to organize the facilities needed to carry out an agricultural education program was essential. The null hypothesis was accepted.

Table 15-B

Category: Planning the Educational Program

Organize the facilities needed to carry out an agricultural education program

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	0	12	101
Instructors of vocational agriculture (secondary)	3	7	99
Instructors of vocational agriculture (postsecondary)	1	8	44
College professors, agricultural education	0	2	23
College professors, extension education	1	5	21
N=327 Total	5	34	288

$\chi^2 = 9.33$. Not significant at .05.

Table 16-B shows that the ability to plan an educational program consistent with the objectives selected was essential for all groups. Since all groups were in agreement the null hypothesis was accepted.

Table 16-B

Category: Planning the Educational Program

To plan an educational program consistent with the objectives selected

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	0	7	106
Instructors of vocational agriculture (secondary)	2	10	97
Instructors of vocational agriculture (postsecondary)	0	8	45
College professors, agricultural education	0	2	23
College professors, extension education	0	1	26
N=327 Total	2	28	297

$\chi^2 = 8.63$. Not significant at .05.

Table 1-C indicates that knowledge of how adults influence learning and behaviour of youth is essential to all respondent groups, therefore, the null hypothesis was accepted.

Table 1-C

Category: Methods and Techniques

How adults influence learning and behavior of youth

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	0	33	80
Instructors of vocational agriculture (secondary)	3	25	81
Instructors of vocational agriculture (postsecondary)	2	20	31
College professors, agricultural education	0	4	21
College professors, extension education	0	7	20
N=327 Total	5	89	233

$\chi^2 = 11.52$. Not significant at .05.

Table 4-C provides evidence that all respondent groups agreed that knowledge of how people learn is an essential competency. The null hypothesis was accepted.

Table 4-C

Category: Methods and Techniques

How people learn

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	2	26	85
Instructors of vocational agriculture (secondary)	1	13	95
Instructors of vocational agriculture (postsecondary)	0	6	47
College professors, agricultural education	0	1	24
College professors, extension education	0	1	26
N=327 Total	3	47	277

$\chi^2 = 14.71$. Not significant at .05.

Table 6-C indicated that all groups agreed knowledge of the effect that motivations have on adult learning was essential and the null hypothesis was accepted.

Table 6-C

Category: Methods and Techniques

The effect that motivations have on adult learning

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	0	36	77
Instructors of vocational agriculture (secondary)	2	36	71
Instructors of vocational agriculture (postsecondary)	1	15	37
College professors, agricultural education	0	4	21
College professors, extension education	0	2	25
N=327 Total	3	93	231

$\chi^2 = 12.93$. Not significant at .05.

Table 20-C indicated that all respondent groups felt the ability to lead small group discussion was essential for their job. Therefore the null hypothesis was accepted.

Table 20-C

Category: Methods and Techniques

Ability to lead a small group discussion

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	1	35	77
Instructors of vocational agriculture (secondary)	1	21	87
Instructors of vocational agriculture (postsecondary)	0	12	41
College professors, agricultural education	0	3	22
College professors, extension education	0	3	24
N=327 Total	2	74	251

$\chi^2 = 9.95$. Not significant at .05.

Table 30-C indicated that all respondent groups felt the ability to provide an educational program consistent with occupational opportunities in the community as essential. This agreement provided evidence to accept the null hypothesis.

Table 30-C

Category: Methods and Techniques

Provide an educational program consistent with the occupational opportunities within the community

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	0	37	76
Instructors of vocational agriculture (secondary)	4	29	76
Instructors of vocational agriculture (postsecondary)	1	17	35
College professors, agricultural education	0	2	23
College professors, extension education	0	9	18
N=327 Total	5	94	228

$\chi^2 = 12.80$. Not significant at .05.

Table 34-C shows that all respondent groups felt the ability to make use of daily, monthly, and yearly activity schedules was essential and the null hypothesis was accepted.

Table 34-C

Category: Methods and Techniques

Make and use daily, monthly, and yearly activity schedules or calendars

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	6	32	75
Instructors of vocational agriculture (secondary)	1	26	82
Instructors of vocational agriculture (postsecondary)	2	18	33
College professors, agricultural education	0	4	21
College professors, extension education	1	7	19
N=327 Total	10	87	230

$\chi^2 = 8.7$. Not significant at .05.

Table 35-C provides evidence that the ability to schedule the educational programs and activities into a timely sequence is essential for all respondent groups. This was evidence that the null hypothesis should be accepted.

Table 35-C

Category: Methods and Techniques

Schedule educational programs and activities into a timely sequence

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	1	22	90
Instructors of vocational agriculture (secondary)	2	19	88
Instructors of vocational agriculture (postsecondary)	1	14	38
College professors, agricultural education	0	2	23
College professors, extension education	0	5	22
N=327 Total	4	62	261

$\chi^2 = 5.5$. Not significant at .05.

Table 36-C indicated all respondent groups agree the ability to use audiovisual materials and equipment was essential and the null hypothesis was accepted.

Table 36-C

Category: Methods and Techniques

Ability to use audiovisual materials and equipment properly

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	1	17	95
Instructors of vocational agriculture (secondary)	1	12	96
Instructors of vocational agriculture (postsecondary)	0	4	49
College professors, agricultural education	0	3	22
College professors, extension education	0	5	22
N=327 Total	2	41	284

$\chi^2 = 3.95$. Not significant at .05.

Table 40-C provides evidence that all groups agreed the ability to provide the proper physical environment conducive to learning was essential. The null hypothesis was accepted.

Table 40-C

Category: Methods and Techniques

Provide the proper physical environment conducive to learning, good light, warm building, etc.

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	0	31	82
Instructors of vocational agriculture (secondary)	2	18	89
Instructors of vocational agriculture (postsecondary)	2	15	36
College professors, agricultural education	0	1	24
College professors, extension education	1	5	21
N=327 Total	5	70	252

$\chi^2 = 15.05$. Not significant at .05.

Table 44-C showed that the ability to maintain an adequate reference library is essential to all groups and provided reason to accept the null hypothesis.

Table 44-C

Category: Methods and Techniques

Ability to maintain an adequate reference library

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	1	24	88
Instructors of vocational agriculture (secondary)	1	18	90
Instructors of vocational agriculture (postsecondary)	0	8	45
College professors, agricultural education	0	3	22
College professors, extension education	1	9	17
N=327 Total	3	62	262

$\chi^2 = 9.14$. Not significant at .05.

Table 2-D shows that all respondent groups felt knowledge of standards necessary to accomplish intended outcomes was essential and the null hypothesis was accepted.

Table 2-D

Category: Evaluation of Local Program

What standards are necessary to accomplish intended outcomes

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	0	37	76
Instructors of vocational agriculture (secondary)	3	28	78
Instructors of vocational agriculture (postsecondary)	0	11	42
College professors, agricultural education	0	3	22
College professors, extension education	0	5	22
N=327 Total	3	84	240

$\chi^2 = 12.90$. Not significant at .05.

Table 5-D indicated that knowledge of whether the goals you are striving to accomplish are the goals of your students or persons participating or your own goals was essential. The null hypothesis was accepted that no significant differences existed.

Table 5-D

Category: Evaluation of Local Program

Whether the goals you are striving to accomplish are the goals of your students or persons participating, or your own goals

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	1	19	93
Instructors of vocational agriculture (secondary)	2	25+	82
Instructors of vocational agriculture (postsecondary)	0	4	49
College professors, agricultural education	0	2	23
College professors, extension education	0	1	26
N=327 Total	3	51	273

$\chi^2 = 13.58$. Not significant at .05.

Table 6-D provided evidence that knowledge of how to obtain necessary feed back during each stage of the program is essential for all respondent groups justifying the acceptance of the null hypothesis.

Table 6-D

Category: Evaluation of Local Program

How to obtain the necessary feed back (approval or disapproval from your publics) during each state of the program

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	0	19	94
Instructors of vocational agriculture (secondary)	2	28	79
Instructors of vocational agriculture (postsecondary)	0	10	43
College professors, agricultural education	0	2	23
College professors, extension education	0	2	25
N=327 Total	2	61	264

$\chi^2 = 12.32$. Not significant at .05.

Table 7-D indicates that knowledge of how to modify the program to maintain focus on the objectives rather than let it fail was essential to all respondent groups providing acceptance of the null hypothesis.

Table 7-D

Category: Evaluation of Local Program

How to modify the program to maintain focus on the objective rather than let it fail

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	0	20	93
Instructors of vocational agriculture (secondary)	1	19	89
Instructors of vocational agriculture (postsecondary)	0	6	47
College professors, agricultural education	0	1	24
College professors, extension education	0	1	26
N=327 Total	1	47	279

$\chi^2 = 9.01$. Not significant at .05.

Table 8-D shows the ability to recognize that some failures are beneficial was essential to all respondent groups providing justification to accept the null hypothesis.

Table 8-D

Category: Evaluation of Local Program

Recognize that some failures are beneficial

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	1	33	79
Instructors of vocational agriculture (secondary)	0	31	78
Instructors of vocational agriculture (postsecondary)	0	11	42
College professors, agricultural education	0	4	21
College professors, extension education	0	9	18
N=327 Total	1	88	238

$\chi^2 = 5.50$. Not significant at .05.

Table 17-D indicates the ability to conduct follow-up studies was considered essential by all groups; therefore the null hypothesis was accepted.

Table 17-D

Category: Evaluation of Local Program

Ability to conduct follow-up studies

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	6	57	50
Instructors of vocational agriculture (secondary)	5	49	55
Instructors of vocational agriculture (postsecondary)	5	22	26
College professors, agricultural education	0	6	19
College professors, extension education	1	10	16
N=327 Total	17	144	166

$\chi^2 = 11.55$. Not significant at .05.

Table 18-D provides evidence that the ability to evaluate source and reference materials was essential to all respondent groups. Their agreement indicated the null hypothesis should be accepted.

Table 18-D

Category: Evaulation of Local Program

Ability to evaluate source and reference materials before using them

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	4	34	75
Instructors of vocational agriculture (secondary)	4	20	85
Instructors of vocational agriculture (postsecondary)	0	9	44
College professors, agricultural education	0	3	22
College professors, extension education	0	5	22
N=327 Total	8	71	248

$\chi^2 = 12.13$. Not significant at .05.

Table 2-E shows that all respondent groups felt that knowledge of how to make comparisons over a period of time to determine what changes have really taken place was essential and the null hypothesis was accepted.

Table 2-E

Category: Re-Analysis of Local Situation

How to make comparisons over a period of time to determine what changes have really taken place

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	2	22	89
Instructors of vocational agriculture (secondary)	2	27	80
Instructors of vocational agriculture (postsecondary)	0	10	43
College professors, agricultural education	0	0	25
College professors, extension education	0	4	23
N=327 Total	4	63	260

$\chi^2 = 10.28$. Not significant at .05.

Table 3-E shows that knowledge of changes taking place in our society which may alter long-range and short-range objectives (i.e., drug problem, etc.) was essential to all respondents. Their agreement indicated that the null hypothesis should be accepted.

Table 3-E

Category: Re-Analysis of Local Situation

Changes taking place in our society which may alter long-range and short-range objectives (i.e., drug problem, etc.)

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	1	26	86
Instructors of vocational agriculture (secondary)	2	38	69
Instructors of vocational agriculture (postsecondary)	1	15	37
College professors, agricultural education	0	3	22
College professors, extension education	0	4	23
N=327 Total	4	86	237

$\chi^2 = 11.10$. Not significant at .05.

Table 7-E indicates all respondents felt it was essential to have the ability to analyze the feedback (public or community acceptance or rejection) about your program outside the educational setting. Since no significant difference was noted the null hypothesis was accepted.

Table 7-E

Category: Re-Analysis of Local Situation

Analyze the feedback (public or community acceptance or rejection) about your program outside the educational setting

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	3	15	95
Instructors of vocational agriculture (secondary)	2	21	86
Instructors of vocational agriculture (postsecondary)	1	16	36
College professors, agricultural education	0	6	19
College professors, extension education	0	5	22
N=327 Total	6	63	258

$\chi^2 = 8.30$. Not significant at .05.

Table 9-E indicates that all respondents felt it was essential to have the ability to work with advisory and/or planning groups to assist them to keep abreast of the changing situation. This provided evidence the null hypothesis should be accepted.

Table 9-E

Category: Re-Analysis of Local Situation

Work with advisory and/or planning groups to assist them to keep abreast of the changing situation

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	2	16	95
Instructors of vocational agriculture (secondary)	2	29	78
Instructors of vocational agriculture (postsecondary)	1	9	43
College professors, agricultural education	0	5	20
College professors, extension education	0	3	24
N=327 Total	5	62	260

$\chi^2 = 8.16$. Not significant at .05.

Table 10-E provides that all groups agreed that the ability to encourage the planning groups and advisory committees to understand planning is a continuous process was essential. The agreement gave reason to accept the null hypothesis.

Table 10-E

Category: Re-Analysis of Local Situation

Encourage the planning groups and advisory committees to understand planning is a continuous process

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	2	24	87
Instructors of vocational agriculture (secondary)	2	31	76
Instructors of vocational agriculture (postsecondary)	1	13	39
College professors, agricultural education	0	2	23
College professors, extension education	0	3	24
N=327 Total	5	73	249

$\chi^2 = 8.82$. Not significant at .05.

Table 1-F shows all respondent groups agreed that knowledge of practicing the techniques of good human relations was essential and the null hypothesis was accepted.

Table 1-F

Category: Personal Characteristics

Practice the techniques of good human relations

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	1	0	112
Instructors of vocational agriculture (secondary)	0	6	103
Instructors of vocational agriculture (postsecondary)	0	3	50
College professors, agricultural education	0	0	25
College professors, extension education	0	0	27
N=327 Total	1	9	317

$\chi^2 = 11.27$. Not significant at .05.

Table 2-F indicates that understanding of professional ethics and know its influence upon educators as essential for all respondents. Therefore, the null hypothesis was accepted.

Table 2-F

Category: Personal Characteristics

Understand professional ethics and know its influence upon educators

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	1	18	94
Instructors of vocational agriculture (secondary)	0	15	94
Instructors of vocational agriculture (postsecondary)	0	6	47
College professors, agricultural education	0	0	25
College professors, extension education	0	5	22
N=327 Total	1	44	282

$\chi^2 = 7.25$. Not significant at .05.

Table 3-F indicates that all respondents felt it was essential to understand that continuous study to acquire and use new knowledge is an important part of education. Since no differences were noted the null hypothesis was accepted.

Table 3-F

Category: Personal Characteristics

Understand that continuous study to acquire and use new knowledge is an important part of education

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	1	8	104
Instructors of vocational agriculture (secondary)	1	12	96
Instructors of vocational agriculture (postsecondary)	1	3	49
College professors, agricultural education	0	1	24
College professors, extension education	0	2	25
N=327 Total	3	26	298

$\chi^2 = 3.47$. Not significant at .05.

Table 4-F also indicates that all respondent groups felt it was essential to maintain human relations with co-workers and the null hypothesis was accepted.

Table 4-F

Category: Personal Characteristics

To maintain human relations with co-workers

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	1	6	106
Instructors of vocational agriculture (secondary)	0	7	102
Instructors of vocational agriculture (postsecondary)	0	3	50
College professors, agricultural education	0	0	25
College professors, extension education	0	1	26
N=327 Total	1	17	309

$\chi^2 = 3.75$. Not significant at .05.

Table 5 provides evidence that all respondent groups agreed it was essential to dress for the teaching situation. No significant difference was noted and the null hypothesis was accepted.

Table 5-F

Category: Personal Characteristics

To dress for the teaching situation

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	0	32	81
Instructors of vocational agriculture (secondary)	1	20	88
Instructors of vocational agriculture (postsecondary)	0	7	46
College professors, agricultural education	0	3	22
College professors, extension education	1	7	19
N=327 Total	2	69	256

$\chi^2 = 13.30$. Not significant at .05.

Table 6-F shows that all respondent groups agreed it was essential to work closely with supervisory staff for both personal improvement and program improvement. This agreement provided evidence the null hypothesis should be accepted.

Table 6-F

Category: Personal Characteristics

Work closely with supervisory staff for both personal improvement and program improvement

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	0	23	90
Instructors of vocational agriculture (secondary)	1	12	96
Instructors of vocational agriculture (postsecondary)	1	7	45
College professors, agricultural education	0	1	24
College professors, extension education	0	1	26
N=327 Total	2	44	281

$\chi^2 = 11.85$. Not significant at .05.

Table 9-F provides data that suggests county extension agents and instructors of secondary vocational agriculture agree the ability to sense the feelings and needs of the people in the community as essential. The majority of all respondent groups indicated the competency was essential. When the null hypothesis was tested the difference was attributed to more responses than expected by the postsecondary teachers in the need to know but not essential column.

Table 9-F

Category: Personal Characteristics

Sense the Feelings and Needs of the People Within the Community

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	1	4	108
Instructors of vocational agriculture (secondary)	0	12	97
Instructors of vocational agriculture (postsecondary)	1	19	33
College professors, agricultural education	0	2	23
College professors, extension education	0	1	26
N=327 Total	2	38	278

$\chi^2 = 42.43$. Significant at .001.

Table 10-A indicates there were significantly more postsecondary responses in the need to know but not essential column, while county extension agents and instructors of secondary vocational agriculture responded with greater frequency than expected in the essential column that knowledge of the development and trends of agriculture in the community was essential. The significance caused rejection of the null hypothesis; however, the re-examination of the table indicated that the majority of the respondents felt it was important.

Table 10-A

Category: Analysis of the Situation in Your Community

The development and trends of agriculture in the community

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	0	4	109
Instructors of vocational agriculture (secondary)	0	9	100
Instructors of vocational agriculture (postsecondary)	2	17	34
College professors, agricultural education	0	3	22
College professors, extension education	0	6	21
N=327 Total	2	39	286

$\chi^2 = 43.53$. Significant at .001.

Table 11-F provides evidence that all respondent groups felt it was essential to understand that communication is a two-way process, talking and attentive listening. Nearly complete agreement provided a basis to accept the null hypothesis.

Table 11-F

Category: Personal Characteristics

Ability to understand that communication is a two-way process; talking and attentive listening

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	1	3	109
Instructors of vocational agriculture (secondary)	0	5	104
Instructors of vocational agriculture (postsecondary)	0	3	50
College professors, agricultural education	0	1	24
College professors, extension education	0	0	27
N=327 Total	1	12	314

$\chi^2 = 4.10$. Not significant at .05.

APPENDIX B

Central Core of Competencies Identified as Essential for All Respondent Groups (Significant Differences Noted When the Null Hypothesis Was Tested)

Table 10-A indicates there were significantly more postsecondary responses in the need to know but not essential column, while county extension agents and instructors of secondary vocational agriculture responded with greater frequency than expected in the essential column that knowledge of the development and trends of agriculture in the community was essential. The significance caused rejection of the null hypothesis, however, the re-examination of the table indicated that the majority of the respondents felt it was important.

Table 10-A

Category: Analysis of the Situation in Your Community

The development and trends of agriculture in the community

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	0	4	109
Instructors of vocational agriculture (secondary)	0	9	100
Instructors of vocational agriculture (postsecondary)	2	17	34
College professors, agricultural education	0	3	22
College professors, extension education	0	6	21
N=327 Total	2	39	286

$\chi^2 = 43.53$. Significant at .001.

Table 12-A indicates that county extension agents felt that knowledge of how to acquire adult participation was essential; however, the postsecondary and secondary vocational agriculture responded with slightly lower than expected frequencies to the essential column. This accounted for the significance indicated and rejection of the null hypothesis. The greater than expected frequencies of the county extension agents and college professors and the majority of the instructors of agriculture indicated this competency should be part of the central core.

Table 12-A

Category: Analysis of the Situation in Your Community

How to encourage and acquire adult participation

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	0	3	110
Instructors of vocational agriculture (secondary)	2	19	88
Instructors of vocational agriculture (postsecondary)	4	19	30
College professors, agricultural education	0	3	22
College professors, extension education	0	0	27
N=327 Total	6	44	277

$\chi^2 = 55.01$. Significant at .001.

Table 14-A indicates that the majority of all respondent groups were in agreement that knowledge of the staff and financial resources was essential for their job. The significance noted was in the post-secondary group who tended to respond more than expected toward the need to know but not essential. The null hypothesis was rejected; however, the differences were considered minimal and the competency was assigned to the central core.

Table 14-A

Category: Analysis of the Situation in Your Community

The staff and financial resources available for the agricultural educational programs in the community

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	3	26	84
Instructors of vocational agriculture (secondary)	0	22	87
Instructors of vocational agriculture (postsecondary)	3	22	28
College professors, agricultural education	0	3	22
College professors, extension education	0	8	19
N=327 Total	6	81	240

$\chi^2 = 21.00$. Significant at .001.

Table 19-A provides evidence that knowledge of the principal crops, livestock and other production resources is essential. The significance shown in the Chi Square test was due to higher than expected frequencies in the essential cells for county extension agents and secondary agricultural teachers. The postsecondary response was slightly higher than expected in the need to know but not essential cell. This provided justification to conclude this competency was part of the central core despite the rejection of the null hypothesis.

Table 19-A

Category: Analysis of the Situation in Your Community

The principal crops, livestock, and other production resources in the community

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	0	3	110
Instructors of vocational agriculture (secondary)	0	4	105
Instructors of vocational agriculture (postsecondary)	1	16	36
College professors, agricultural education	0	3	22
College professors, extension education	0	7	20
N=327 Total	1	33	293

$\chi^2 = 48.65$. Significant at .001.

Table 25-A shows that the competency of being cognizant and understanding technological changes that influence the curriculum and programs was essential by all respondent groups. The difference appeared in the higher than expected frequencies by county extension agents in the need to know but not essential column. This difference has provided evidence that the null hypothesis should be rejected; however, the competency would best fit into the central core.

Table 25-A

Category: Analysis of the Situation in Your Community

Be cognizant and understanding of technological changes that influence curriculum and programs

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	4	43	66
Instructors of vocational agriculture (secondary)	2	19	88
Instructors of vocational agriculture (postsecondary)	0	6	47
College professors, agricultural education	0	1	24
College professors, extension education	1	8	18
N=327 Total	7	77	243

$\chi^2 = 30.45$. Significant at .001.

Table 1-B shows that all respondent groups agreed that the ability to solicit opinions from representatives of the planning groups and advisory committees to develop plans was essential. The instructors of vocational agriculture at the secondary level account for the significance; however, the majority considered the competency essential. This competency was assigned to the central core after a careful analysis of the frequency table even though the significance indicated the null hypothesis should be rejected.

Table 1-B

Category: Planning the Educational Program

Solicit opinions from representatives of the planning groups and advisory committees to develop plans for one or more areas

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	0	22	91
Instructors of vocational agriculture (secondary)	4	31	74
Instructors of vocational agriculture (postsecondary)	0	11	42
College professors, agricultural education	0	2	23
College professors, extension education	0	0	26
N=327 Total	4	66	256

$\chi^2 = 33.42$. Significant at .001.

Table 3-B pointed out that all respondent groups felt the ability to select and use representative advisory groups who are vitally interested in the decisions that effect their community was essential. The county extension agents responded greater than expected in the essential column and the instructors of agriculture slightly higher than expected in the need to know but not essential column. The null hypothesis was rejected for the differences noted; however, the majority of each group responded to the competency as being essential for their group, and hence it was placed in the central core.

Table 3-B

Category: Planning the Educational Program

Select and use representative advisory groups who are vitally interested in the decisions that affect their community

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	0	14	99
Instructors of vocational agriculture (secondary)	2	32	75
Instructors of vocational agriculture (postsecondary)	0	11	42
College professors, agricultural education	0	3	22
College professors, extension education	0	2	25
N=327 Total	2	62	263

$\chi^2 = 18.66$. Significant at .02.

Table 5-B indicates all respondent groups agreed that the ability to organize and plan on a year-round basis was essential. Instructors of secondary agriculture account for the slight difference indicated by responding slightly higher than expected in the need to know but not essential and slightly lower in the essential column. The null hypothesis was rejected but the frequencies indicated it was essential to all respondent groups.

Table 5-B

Category: Planning the Educational Program

Organize advisory groups and conduct planning activities on a continuous basis (year around and year to year)

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	1	29	83
Instructors of vocational agriculture (secondary)	5	38	66
Instructors of vocational agriculture (postsecondary)	1	13	39
College professors, agricultural education	0	3	22
College professors, extension education	0	2	25
N=327 Total	7	85	235

$\chi^2 = 18.35$. Significant at .02.

Table 9-B shows that all groups agreed that the ability to encourage advisory groups to identify priorities so that goals can be established was essential. All groups responded slightly higher than expected in the essential column except the instructors of secondary agriculture who were slightly lower than expected in the essential and higher than expected in the need to know but not essential columns, thus accounting for the significance shown. The competency was identified as part of the central core despite the rejection of the null hypothesis.

Table 9-B

Category: Planning the Educational Program

Encourage the advisory group to identify priorities so that goals can be established

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	0	30	83
Instructors of vocational agriculture (secondary)	3	40	66
Instructors of vocational agriculture (postsecondary)	0	11	42
College professors, agricultural education	0	5	20
College professors, extension education	0	2	25
N=327 Total	3	88	236

$\chi^2 = 19.10$. Significant at .02.

Table 10-B provides evidence that all respondent groups were in agreement that the ability to select the goals the community needs as indicated by the priorities identified was essential. The slight difference indicating significance was due to the greater than expected frequencies in the not needed and need to know but not essential columns by the instructors of agriculture, both secondary and postsecondary and the greater than expected frequencies for extension agents and college professors in the essential column. The null hypothesis that no differences existed was rejected, however, the competency was judged to be in the central core, essential for all groups.

Table 10-B

Category: Planning the Educational Program

Select the goals the community needs as indicated by the priorities identified by advisory groups

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	0	35	78
Instructors of vocational agriculture (secondary)	4	39	66
Instructors of vocational agriculture (postsecondary)	0	19	34
College professors, agricultural education	0	4	21
College professors, extension education	0	4	23
N=327 Total	4	101	222

$\chi^2 = 16.46$. Significant at .05.

Table 12-B indicates that the ability to formulate performance based objectives congruent with the goals was essential. All groups except the college professors tended to respond with greater than expected frequencies in the need to know but not essential column accounting for the significance shown. This provided significant difference for rejection of the null hypothesis. However the majority of the respondents felt the competency was essential and it was placed in the central core.

Table 12-B

Category: Planning the Educational Program

Formulate performance-based objectives congruent with the goals

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	3	41	69
Instructors of vocational agriculture (secondary)	5	37	67
Instructors of vocational agriculture (postsecondary)	0	17	36
College professors, agricultural education	1	2	22
College professors, extension education	0	2	25
N=327 Total	9	99	219

$\chi^2 = 19.72$. Significant at .02.

Table 14-B provides evidence that all respondent groups felt that the ability to formulate objectives so that planning and advisory groups will understand when they have reached them was essential. The significance was a result of county extension agents responding lower than expected in the essential column and higher in the need to know but not essential column while the college professors responded with greater than expected frequency to the essential column. The null hypothesis was rejected and the competency was placed in the central core.

Table 14-B

Category: Planning the Educational Program

Formulate the objectives so the planning groups and advisory committees and persons participating will understand when they have reached them

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	3	46	64
Instructors of vocational agriculture (secondary)	7	33	69
Instructors of vocational agriculture (postsecondary)	1	17	35
College professors, agricultural education	0	2	23
College professors, extension education	0	1	26
N=327 Total	11	99	217

$\chi^2 = 27.69$. Significant at .001.

Table 3-C indicates that all groups except county extension agents responded with higher than expected frequencies in the essential column. This was the reason for significance, however, general agreement exists and the competency was identified as part of the central core despite the fact that the null hypothesis was rejected.

Table 3-C

Category: Methods and Techniques

How the attitude of the learner affects the learning process

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	0	33	80
Instructors of vocational agriculture (secondary)	2	9	98
Instructors of vocational agriculture (postsecondary)	0	5	48
College professors, agricultural education	0	2	23
College professors, extension education	0	1	26
N=327 Total	2	50	275

$\chi^2 = 30.00$. Significant at .001.

Table 5-C provides evidence that knowledge of how the use of verbal and non-verbal reinforcement to facilitate learning was considered essential. County extension agents' responses in the column of need to know but not essential were higher than expected providing the difference of significance for this competency. The null hypothesis was rejected; however, the frequency table provided evidence the competency should be part of the central core.

Table 5-C

Category: Methods and Techniques

How the use of verbal and non-verbal reinforcement facilitates learning

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	4	33	76
Instructors of vocational agriculture (secondary)	1	17	91
Instructors of vocational agriculture (postsecondary)	2	6	45
College professors, agricultural education	0	4	21
College professors, extension education	0	1	26
N=327 Total	7	61	259

$\chi^2 = 19.29$. Significant at .02.

Table 7-C shows that all respondent groups agreed that knowledge of the effect that youths' motivations have upon their learning was essential. A significant difference sufficient to reject the null hypothesis was noted because instructors of agriculture indicated more than expected in the essential column and county extension agents responded more than expected in the need to know but not essential column. The majority of the respondents indicated the competency was essential to be part of the central core.

Table 7-C

Category: Methods and Techniques

The effect that youths motivations have on their learning

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	1	40	72
Instructors of vocational agriculture (secondary)	1	11	97
Instructors of vocational agriculture (postsecondary)	0	6	47
College professors, agricultural education	0	1	24
College professors, extension education	0	5	22
N=327 Total	2	63	262

$\chi^2 = 31.88$. Significant at .001.

Table 9-C provides evidence that knowledge of the use of various kinds of questions such as reasoning questions is essential. County extension agent responses indicate that it was not as essential as the other respondent groups. The null hypothesis was rejected and the competency was assigned to the central core.

Table 9-C

Category: Methods and Techniques

Use various kinds of questions such as: reasoning

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	6	37	70
Instructors of vocational agriculture (secondary)	0	16	93
Instructors of vocational agriculture (postsecondary)	0	4	49
College professors, agricultural education	0	4	21
College professors, extension education	1	6	20
N=327 Total	7	67	253

$\chi^2 = 30.41$. Significant at .001.

Table 10-C indicates that knowledge of various kinds of questions such as judgment questions is essential. County extension agents responded more than expected to the need to know but not essential, accounting for the significance. This indicated the null hypothesis should be rejected even though the majority of the respondents indicated this competency should be part of the central core.

Table 10-C

Category: Methods and Techniques

Use various kinds of questions such as: judgment

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	5	36	72
Instructors of vocational agriculture (secondary)	0	12	97
Instructors of vocational agriculture (postsecondary)	0	4	49
College professors, agricultural education	0	3	22
College professors, extension education	1	6	20
N=327 Total	6	61	260

$\chi^2 = 32.56$. Significant at .001.

Table 12-C indicated that except for a few more responses than expected by instructors of vocational agriculture in the need to know but not necessary column all groups agreed knowledge of how to involve planning groups and other leaders in implementation of the educational program was essential. The competency was assigned to the central core even though the null hypothesis was rejected.

Table 12-C

Category: Methods and Techniques

To involve planning groups and other leaders in implementing the educational program

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	0	24	89
Instructors of vocational agriculture (secondary)	2	41	66
Instructors of vocational agriculture (postsecondary)	0	24	29
College professors, agricultural education	0	4	21
College professors, extension education	0	3	24
N=327 Total	2	96	229

$\chi^2 = 25.70$. Significant at .01.

Table 13-C indicates the ability to work with existing local organizations to promote educational programs as essential to all respondent groups. The postsecondary teachers indicated with greater frequency than expected that they need to know but not essential. This accounts for sufficient significance to reject the null hypothesis; however, the majority of respondents indicated this competency should be part of the central core.

Table 13-C

Category: Methods and Techniques

To work with existing local organizations to promote educational programs

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	0	26	87
Instructors of vocational agriculture (secondary)	1	29	79
Instructors of vocational agriculture (postsecondary)	4	17	32
College professors, agricultural education	0	0	25
College professors, extension education	0	4	23
N=327 Total	5	76	246

$\chi^2 = 28.40$. Significant at .001.

Table 14-C indicates the ability to use various kinds of problem-solving teaching methods such as steps and key points were essential. County extension agents responded with a greater frequency than expected to need to know but not essential providing the significance indicated. This provided evidence to reject the null hypothesis; however, the majority of the respondents considered it essential and it was assigned to the central core.

Table 14-C

Category: Methods and Techniques

Use various kinds of problem-solving teaching methods, such as: steps and key points

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	5	51	57
Instructors of vocational agriculture (secondary)	0	28	81
Instructors of vocational agriculture (postsecondary)	1	20	32
College professors, agricultural education	1	2	22
College professors, extension education	1	8	18
N=327 Total	8	109	210

$\chi^2 = 24.24$. Significant at .001.

Table 19-C indicated the ability to lead large group discussions was essential to all groups. County extension agents responded with greater than expected frequency to the need to know but not essential group accounting for the significance indicated. The competency was assigned to the central core and the null hypothesis was rejected.

Table 19-C

Category: Methods and Techniques

The ability to lead large group discussion

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	2	45	66
Instructors of vocational agriculture (secondary)	1	33	75
Instructors of vocational agriculture (postsecondary)	2	10	41
College professors, agricultural education	0	3	22
College professors, extension education	1	4	22
N=327 Total	6	95	226

$\chi^2 = 17.69$. Significant at .05.

Table 32-C provided evidence that the ability to determine which method or technique to use was essential. The significance indicated was due to a slightly more than expected frequency of responses by county extension agents and instructors of vocational agriculture in the column of need to know but not essential. The null hypothesis was rejected and the competency was assigned to the central core because the majority of responses indicated it was essential for all.

Table 32-C

Category: Methods and Techniques

Determine which method or technique to use during the educational process depending on where the learner is: (awareness, interest, appraisal, trial adoption, or integration)

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	5	40	68
Instructors of vocational agriculture (secondary)	4	27	78
Instructors of vocational agriculture (postsecondary)	0	10	43
College professors, agricultural education	0	2	23
College professors, extension education	0	2	25
N=327 Total	9	81	237

$\chi^2 = 22.14$. Significant at .01.

Table 39-C indicates the ability to plan, organize, and conduct field trips is essential. The significance noted was due to greater than expected frequencies in need to know but not essential column by county extension agents and college professors of extension education. Even though the null hypothesis was rejected, the analysis of the frequencies provided evidence it was part of the central core.

Table 39-C

Category: Methods and Techniques

Ability to plan, organize, and conduct field trips with groups or individuals

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	0	25	88
Instructors of vocational agriculture (secondary)	1	5	103
Instructors of vocational agriculture (postsecondary)	0	5	48
College professors, agricultural education	0	2	23
College professors, extension education	0	11	16
N=327 Total	1	48	278

χ^2 = 32.35. Significant at .001.

Table 54-C provides evidence that all groups felt the ability to serve as a counselor on an informal basis as the need arises as essential. The significance indicated was due to the lower than expected frequency in the essential and higher than expected, in the need to know but not essential by all groups. The null hypothesis was rejected and the competency was assigned to the central core because the majority of the respondents indicated it was essential.

Table 54-C

Category: Methods and Techniques

Ability to serve as a counselor on an informal basis as the need arises

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	3	55	55
Instructors of vocational agriculture (secondary)	3	32	74
Instructors of vocational agriculture (postsecondary)	0	12	41
College professors, agricultural education	0	3	22
College professors, extension education	1	8	18
N-327 Total	7	110	210

$\chi^2 = 24.14$. Significant at .01.

Table 55-C indicated the ability to plan and coordinate method demonstrations as essential to all respondent groups. More instructors of vocational agriculture responded to need to know but not essential, accounting for the significance shown and the rejection of the null hypothesis. An analysis of the frequency table indicates the majority of respondents agreed the competency was part of the central core.

Table 55-C

Category: Methods and Techniques

Ability to plan and coordinate method demonstrations

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	0	35	78
Instructors of vocational agriculture (secondary)	5	43	61
Instructors of vocational agriculture (postsecondary)	1	19	33
College professors, agriculture education	0	7	18
College professors, extension education	4	9	14
N=327 Total	10	113	204

χ^2 = 21.39. Significant at .01.

Table 56-C indicated the ability to conduct a result demonstration was essential to all respondent groups. The significance noted that more than expected responses were recorded for instructors of agriculture in the not needed and need to know but not essential columns. The competency was placed in the central core even though the null hypothesis was rejected.

Table 56-C

Category: Methods and Techniques

Ability to conduct result demonstrations

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	0	26	87
Instructors of vocational agriculture (secondary)	7	40	62
Instructors of vocational agriculture (postsecondary)	4	20	29
College professors, agricultural education	0	9	16
College professors, extension education	3	9	15
N=327 Total	14	104	209

χ^2 = 20.51. Significant at .01.

Table 1-D indicates the respondent groups felt the knowledge of policies and practices in your community which may prevent the accomplishment of the stated objective as being essential. The significance noted occurred from higher than expected frequencies in the need to know but not necessary column. The null hypothesis was rejected and the competency was placed in the central core because the majority of the respondents felt it was essential.

Table 1-D

Category: Evaluation of Local Program

Policies and practices in your community which may prevent the accomplishment of the stated objective

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	0	22	91
Instructors of vocational agriculture (secondary)	4	31	74
Instructors of vocational agriculture (postsecondary)	0	11	42
College professors, agricultural education	0	2	23
College professors, extension education	0	0	27
N=327 Total	4	66	257

$\chi^2 = 22.80$. Significant at .01.

Table 3-D indicated knowledge of how to obtain and maintain support for your program was essential. The significance was due to higher than expected frequencies by postsecondary teachers in the need to know but not necessary column and the higher than expected frequency in the essential column by the other respondent groups. The null hypothesis was rejected and the competency was assigned to the central core.

Table 3-D

Category: Evaluation of Local Program

How to obtain and maintain public support for your program

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	0	6	107
Instructors of vocational agriculture (secondary)	0	10	99
Instructors of vocational agriculture (postsecondary)	1	15	37
College professors, agricultural education	0	1	24
College professors, extension education	0	4	23
N=327 Total	1	36	290

$\chi^2 = 27.54$. Significant at .001.

Table 4-D provides evidence that knowledge of conditions that existed at the time the goals were established is essential for all respondent groups. Significance was shown because the instructors of agriculture responded to need to know but not essential and the county extension agents responded essential with greater frequencies than expected. The competency was assigned to the central core and the null hypothesis was rejected.

Table 4-D

Category: Evaluation of Local Program

The conditions that existed at the time the goals were established

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	1	36	76
Instructors of vocational agriculture (secondary)	6	39	64
Instructors of vocational agriculture (postsecondary)	0	22	31
College professors, agricultural education	0	6	19
College professors, extension education	0	4	23
N=327 Total	7	107	213

$\chi^2 = 16.90$. Significant at .05.

Table 13-D indicates the ability to understand and use proper reporting procedures for both local and state evaluation reports was essential for all respondent groups. County extension agents responded with greater frequency than expected in both, not needed and needed but not essential columns which accounted for the significance; however, it was not great enough to reject from the central core even though the null hypothesis was rejected.

Table 13-D

Category: Evaluation of Local Program

Understand and use proper reporting procedures for both local and state evaluation reports

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	14	47	52
Instructors of vocational agriculture (secondary)	2	33	74
Instructors of vocational agriculture (postsecondary)	5	19	29
College professors, agricultural education	0	2	23
College professors, extension education	0	4	23
N=327 Total	21	105	201

$\chi^2 = 36.25$. Significant at .001.

Table 1-E provides evidence that knowledge of the consequence of achieving the stated objectives of your program was essential to all respondents. The significance shown was the result of slightly higher than expected frequencies in the need to know but not essential column by both county extension agents and instructors of vocational agriculture. The null hypothesis was rejected but the differences did not alter the majority felt the competency was essential and was assigned to the central core.

Table 1-E

Category: Re-Analysis of Local Situation

The consequence of achieving the stated objectives of your program

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	3	31	79
Instructors of vocational agriculture (secondary)	3	35	71
Instructors of vocational agriculture (postsecondary)	0	14	39
College professors, agricultural education	0	0	25
College professors, extension education	0	3	24
N=327 Total	6	83	238

$\chi^2 = 18.02$. Significant at .05.

Table 4-E indicates that knowledge of how to involve planning groups on a continuous basis to provide reliable feedback to a new situation and revised goals as essential for all groups. Both county extension agents and instructors of vocational agriculture responded to need to know but not essential with higher than expected frequency, accounting for the significance indicated and rejection of the null hypothesis. The majority of the respondents considered the competency essential and justified the assignment into the central core.

Table 4-E

Category: Re-Analysis of Local Situation

How to involve planning groups on a continuous basis to provide reliable feedback to a new situation and revised goals

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	1	24	88
Instructors of vocational agriculture (secondary)	4	44	61
Instructors of vocational agriculture (postsecondary)	3	14	36
College professors, agricultural education	0	5	20
College professors, extension education	0	1	26
N=327 Total	8	88	231

$\chi^2 = 26.88$. Significant at .001.

Table 5-E provides evidence that knowledge of whether the educational program has actually provided the knowledge and competencies needed for the participant to be successful was considered essential. County extension agents responded with greater than expected frequency to, need to know but not essential to account for the significance indicated. This provided evidence the null hypothesis should be rejected even though the majority of responses indicated the competency should be part of the central core.

Table 5-E

Category: Re-Analysis of Local Situation

Whether the educational program has actually provided the knowledge and competencies needed for the participant so he can be successful

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	3	36	74
Instructors of vocational agriculture (secondary)	2	22	85
Instructors of vocational agriculture (postsecondary)	0	8	45
College professors, agricultural education	0	2	23
College professors, extension education	0	1	26
N=327 Total	5	69	253

$\chi^2 = 20.06$. Significant at .01.

Table 6-E shows that knowledge of whether changes in resources within your community have occurred to change the original situation was essential for all respondent groups. Instructors of vocational agriculture at the secondary level responded slightly more than expected to need to know but not essential. This accounts for the significance necessary to reject the null hypothesis; however, an analysis of the frequency table indicates the majority of the respondents felt the competency was essential.

Table 6-E

Category: Re-Analysis of Local Situation

Whether changes in resources within your community have occurred to change the original situation

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	2	21	90
Instructors of vocational agriculture (secondary)	1	34	74
Instructors of vocational agriculture (postsecondary)	4	17	32
College professors, agricultural education	0	6	19
College professors, extension education	0	4	23
N=327 Total	7	82	238

$\chi^2 = 17.71$. Significant at .05.

Table 8-E shows the ability to understand whether the people or students have changed to determine the next step for teaching as essential to all respondents. County extension agents responded with greater frequency than expected to need to know but not essential, accounting for the significance necessary to reject the null hypothesis that no difference existed. However, an analysis of the frequency table indicates the majority of the respondents felt the competency was essential and it appears in the central core.

Table 8-E

Category: Re-Analysis of Local Situation

Understand whether the people or students have changed to determine the next step for teaching

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	0	34	74
Instructors of vocational agriculture (secondary)	0	24	85
Instructors of vocational agriculture (postsecondary)	0	14	39
College professors, agricultural education	0	4	21
College professors, extension education	0	2	25
N=327 Total	5	78	244

$\chi^2 = 18.22$. Significant at .02.

Table 9-F provides data that suggests county extension agents and instructors of secondary vocational agriculture agree the ability to sense the feelings and needs of the people in the community as essential. The difference noted is attributed to postsecondary instructors who feel they need to know but not essential. However, the majority of all respondent groups have indicated the competency was essential. The null hypothesis was rejected.

Table 9-F

Category: Personal Characteristics

Sense the feelings and needs of the people within the community

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	1	4	108
Instructors of vocational agriculture (secondary)	0	12	97
Instructors of vocational agriculture (postsecondary)	1	19	33
College professors, agricultural education	0	2	23
College professors, extension education	0	1	26
N=327 Total	2	38	278

$\chi^2 = 42.43$. Significant at .001.

APPENDIX C

Professional Competencies Essential for Instructors of Secondary Vocational Agriculture and County Extension Agents

Table 6-A provides evidence that county extension agents and instructors of vocational agriculture have considered the geographic location and ethnic groupings of the people who are living in the community as essential and the postsecondary felt it was needed but not essential. The null hypothesis was rejected.

Table 6-A

Category: Analysis of the Situation in Your Community

The geographic location and ethnic groupings of the people who are living in your community

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	2	33	78
Instructors of vocational agriculture (secondary)	7	26	76
Instructors of vocational agriculture (postsecondary)	13	28	12
College professors, agricultural education	1	10	14
College professors, extension education	0	6	21
N=327 Total	23	103	201

$\chi^2 = 57.52$. Significant at .001.

Table 20-A indicates that the ability to secure leaders for participation from all strata is essential; however, the significance shown was due to more secondary and postsecondary teachers showing preference for the need to know but not essential. The null hypothesis was rejected but the analysis of the frequency table indicates that a majority of the instructors of secondary agriculture and county extension agents felt it was essential.

Table 20-A

Category: Analysis of the Situation in Your Community

Secure leaders for participation from all strata within the community

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	0	10	103
Instructors of vocational agriculture (secondary)	1	34	74
Instructors of vocational agriculture (postsecondary)	5	22	26
College professors, agricultural education	2	7	16
College professors, extension education	0	6	21
N=327 Total	8	79	240

$\chi^2 = 48.14$. Significant at .001.

Table 21-A indicates that postsecondary teachers do not feel they need to have the ability to identify all community resources. County extension agents and instructors of secondary vocational agriculture agreed that it was essential. The null hypothesis was rejected.

Table 21-A

Category: Analysis of the Situation in Your Community

Identify all community resources

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	1	30	32
Instructors of vocational agriculture (secondary)	1	41	67
Instructors of vocational agriculture (postsecondary)	3	31	19
College professors, agricultural education	1	9	15
College professors, extension education	0	7	20
N=327 Total	6	118	203

$\chi^2 = 26.01$ significant at .01.

Table 22-A provides evidence that postsecondary instructors of agriculture do not agree with county extension agents and secondary instructors of vocational agriculture that it is essential to have the ability to provide leadership and cooperation through work and planning with special commodity groups in the community. The difference indicated was the basis for rejecting the null hypothesis.

Table 22-A

Category: Analysis of the Situation in Your Community

Provide leadership and cooperation through work and planning with special commodity groups in the community

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	0	42	71
Instructors of vocational agriculture (secondary)	4	44	61
Instructors of vocational agriculture (postsecondary)	6	29	18
College professors, agricultural education	2	7	16
College professors, extension education	0	4	23
N=327 Total	12	126	189

$\chi^2 = 32.72$. Significant at .001.

Table 27-A shows that postsecondary instructors of agriculture do not agree with county extension agents and secondary instructors that the ability to be sensitive to ethnic groups and their needs in your community is essential. Therefore the null hypothesis was rejected.

Table 27-A

Category: Analysis of the Situation in Your Community

Be sensitive to ethnic groups and their needs in your community

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	3	54	56
Instructors of vocational agriculture (secondary)	8	46	55
Instructors of vocational agriculture (postsecondary)	9	34	10
College professors, agricultural education	1	5	19
College professors, extension education	0	8	19
N=327 Total	21	147	159

$\chi^2 = 39.63$. Significant at .001.

Table 2-C indicates that postsecondary instructors do not agree with county extension agents and instructors of secondary vocational agriculture that knowledge of how the use of approved practices by youth can influence their parents and be a method of teaching. The significant difference was the basis for rejecting the null hypothesis.

Table 2-C

Category: Methods and Techniques

How the use of approved practices by youth can influence their parents and be a method of teaching

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	2	36	75
Instructors of vocational agriculture (secondary)	1	28	80
Instructors of vocational agriculture (postsecondary)	4	26	23
College professors, agricultural education	1	2	22
College professors, extension education	0	9	18
N=327 Total	8	101	218

$\chi^2 = 25.50$. Significant at .01.

APPENDIX D

Professional Competencies Essential for Instructors of Secondary Vocational Agriculture

Table 5-A provides evidence that the instructors of agriculture felt their relationship with the State Department of Education and the U. S. Office of Education was essential. The college professors of agricultural education confirmed this need. The significant differences were the result of the not necessary and not essential responses of county extension agents and postsecondary instructors of agriculture. The null hypothesis was rejected.

Table 5-A

Category: Re-Analysis of Local Situation

Your relationship with the State Department of Education and the U. S. Office of Education

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	37	75	1
Instructors of vocational agriculture (secondary)	1	38	70
Instructors of vocational agriculture (postsecondary)	5	26	22
College professors, agricultural education	1	2	22
College professors, extension education	6	18	3
N=327 Total	50	159	118

$\chi^2 = 149.70$. Significant at .001.

Table 26-A indicates that instructors of vocational agriculture felt their ability to identify the handicapped and disadvantaged persons in their community to provide special emphasis and programs was essential. College professors of agricultural education were in agreement. The other respondent groups rejected this competency and felt it was not necessary or not essential, hence the null hypothesis was rejected.

Table 26-A

Category: Re-Analysis of Local Situation

Identify the handicapped and disadvantaged persons in the community to provide special emphasis and programs

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	11	76	26
Instructors of vocational agriculture (secondary)	6	30	73
Instructors of vocational agriculture (postsecondary)	9	32	12
College professors, agricultural education	0	7	18
College professors, extension education	1	17	9
N=327 Total	27	162	138

$\chi^2 = 67.61$. Significant at .001.

Table 4-B indicates that instructors of secondary vocational agriculture felt more than other groups that their ability to plan programs for disadvantaged and handicapped was essential, while the other respondent groups felt it was not necessary or not essential. The college professors of agricultural education were in agreement that it was essential for instructors of vocational agriculture. Therefore the null hypothesis was rejected.

Table 4-B

Category: Planning the Educational Program

Plan programs for disadvantaged and handicapped

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	16	70	27
Instructors of vocational agriculture (secondary)	10	47	52
Instructors of vocational agriculture (postsecondary)	10	34	9
College professors, agricultural education	0	9	16
College professors, extension education	0	12	15
N=327 Total	36	172	119

$\chi^2 = 38.92$. Significant at .001.

Table 28-C shows that instructors of secondary vocational agriculture felt that the ability to teach basic parliamentary procedure skills was essential while the other respondent groups generally felt they need to know but it was not essential. This difference accounted for the significance and the null hypothesis was rejected.

Table 28-C

Category: Methods and Techniques

Use and teach basic parliamentary procedure skills

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	4	60	49
Instructors of vocational agriculture (secondary)	0	22	87
Instructors of vocational agriculture (postsecondary)	8	33	12
College professors, agricultural education	0	7	18
College professors, extesnion education	4	15	8
N=327 Total	16	137	174

$\chi^2 = 77.28$. Significant at .001.

APPENDIX E

Professional Competencies Essential for Instructors of Secondary and Postsecondary Vocational Agriculture

Table 23-A provides evidence that instructors of secondary and postsecondary vocational agriculture felt it was essential they understand employment opportunities and employment patterns within the community. County extension agents felt they need to know but it was not essential, hence the significance. The null hypothesis was rejected.

Table 23-A

Category: Analysis of the Situation in Your Community

Understand employment opportunities and employment patterns within the community

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	3	76	34
Instructors of vocational agriculture (secondary)	0	29	80
Instructors of vocational agriculture (postsecondary)	0	14	39
College professors, agricultural education	1	5	19
College professors, extension education	0	15	12
N=327 Total	4	139	184

χ^2 = 60.51. Significant at .001.

Table 8-C indicates that instructors of secondary and post-secondary agriculture felt the ability to use memory questions was essential. Extension agents responded with greater than expected frequency to the need to know but not essential column. The null hypothesis was rejected.

Table 8-C

Category: Methods and Techniques

Use various kinds of questions such as: memory

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	12	54	47
Instructors of vocational agriculture (secondary)	4	30	75
Instructors of vocational agriculture (postsecondary)	0	11	42
College professors, agricultural education	1	8	16
College professors, extension education	2	8	17
N=327 Total	19	111	197

$\chi^2 = 30.41$. Significant at .001.

Table 11-C indicates instructors of secondary and postsecondary agriculture felt the ability to use creative thinking questions was essential while county extension agents responded with greater than expected frequency to need to know but not essential column. The null hypothesis was rejected.

Table 11-C

Category: Methods and Techniques

Use various kinds of questions such as: creative thinking

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	6	51	56
Instructors of vocational agriculture (secondary)	0	18	91
Instructors of vocational agriculture (postsecondary)	0	7	46
College professors, agricultural education	0	2	23
College professors, extension education	1	9	17
N=327 Total	7	87	233

$\chi^2 = 48.97$. Significant at .001.

Table 15-C shows instructors of secondary and postsecondary agriculture felt the ability to use the problem-solving technique such as possibilities and factors was essential. County extension agents responded with significant difference to not necessary and need to know but not necessary columns and the null hypothesis was rejected.

Table 15-C

Category: Methods and Techniques

Use various kinds of problem-solving teaching methods such as: possibilities and factors

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	6	53	54
Instructors of vocational agriculture (secondary)	0	31	78
Instructors of vocational agriculture (postsecondary)	0	17	36
College professors, agricultural education	1	5	19
College professors, extension education	1	8	18
N=327 Total	8	114	205

$\chi^2 = 22.45$. Significant at .01.

Table 16-C indicates that instructors of secondary and post-secondary agriculture felt the use of the problem-solving technique such as advantages and disadvantages was essential. County extension agents responded with greater than expected frequency to not necessary and need to know but not necessary which accounted for the difference indicated and rejection of the null hypothesis.

Table 16-C

Category: Methods and Techniques

Use various kinds of problem-solving techniques such as: advantages and disadvantages

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Now But Not Essential	Essential
County extension agents	6	41	66
Instructors of vocational agriculture (secondary)	0	23	86
Instructors of vocational agriculture (postsecondary)	0	13	40
College professors, agricultural education	1	3	21
College professors, extension education	0	9	18
N=327 Total	7	89	231

χ^2 = 21.61. Significant at .01.

Table 17-C shows that instructors of secondary and postsecondary agriculture felt the ability to use problem-solving teaching methods such as, present situation compared to the ideal situation was essential. County extension agents responded with greater frequency than expected to need to know but not essential to account for the significant differences and rejection of the null hypothesis.

Table 17-C

Category: Methods and Techniques

Use various kinds of problem-solving teaching methods such as: present situation compared to ideal situation

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	4	49	60
Instructors of vocational agriculture (secondary)	0	30	78
Instructors of vocational agriculture (postsecondary)	0	13	40
College professors, agricultural education	1	5	20
College professors, extension education	0	9	18
N=327 Total	5	106	216

$\chi^2 = 16.88$. Significant at .05.

Table 18-C shows that instructors of secondary and postsecondary agriculture felt that the teaching methods such as question-answer discussion was essential, while county extension agents generally responded with greater than expected frequency to need to know but not essential. The null hypothesis was rejected.

Table 18-C

Category: Methods and Techniques

Use various kinds of problem-solving teaching methods such as: question-answer discussion

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	4	42	67
Instructors of vocational agriculture (secondary)	1	23	86
Instructors of vocational agriculture (postsecondary)	0	7	46
College professors, agricultural education	0	6	19
College professors, extension education	0	9	18
N=327 Total	4	87	236

$\chi^2 = 22.67$. Significant at .01.

Table 21-C provides evidence that instructors of secondary and postsecondary agriculture felt the ability to construct and use various kinds of tests such as true-false as essential while county extension agents responded with greater than expected frequencies to not needed and need to know but not essential and the null hypothesis was rejected.

Table 21-C

Category: Methods and Techniques

Construct and use various kinds of tests, such as: true-false

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	57	50	6
Instructors of vocational agriculture (secondary)	1	28	80
Instructors of vocational agriculture (postsecondary)	5	13	35
College professors, agricultural education	2	6	17
College professors, extension education	7	15	5
N=327 Total	72	112	143

$\chi^2 = 154.57$. Significant at .001.

Table 22-C shows that instructors of secondary and postsecondary agriculture felt it was essential to have the ability to construct a test using matching-questions while extension agents felt it was not essential or not needed and the null hypothesis was rejected.

Table 22-C

Category: Methods and Techniques

Construct and use various kinds of tests such as:
Matching Questions

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	57	50	6
Instructors of vocational agriculture (secondary)	1	24	84
Instructors of vocational agriculture (postsecondary)	1	13	39
College professors, agricultural education	1	7	17
College professors, extension education	7	14	6
N=327 Total	67	108	152

$\chi^2 = 172.50$. Significant at .001.

Table 23-C provides evidence that instructors of secondary and postsecondary agriculture felt the ability to construct short answer tests was essential. County extension agents rejected the need for this competency and therefore the null hypothesis was also rejected.

Table 23-C

Category: Methods and Techniques

Construct and use various kinds of tests such as: short-answer

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	57	50	6
Instructors of vocational agriculture (secondary)	1	26	82
Instructors of vocational agriculture (postsecondary)	0	11	42
College professors, agricultural education	1	6	18
College professors, extension education	7	15	5
N=327 Total	66	108	153

$\chi^2 = 180.29$. Significant at .001.

Table 24-C indicates that instructors of secondary and post-secondary agriculture felt it was essential to have the ability to construct a multiple-choice test. County extension agents felt it was not necessary to have this competency. The significant differences shown was the basis for rejecting the null hypothesis.

Table 24-C

Category: Methods and Techniques

Construct and use various kinds of tests such as: multiple choice

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	59	48	6
Instructors of vocational agriculture (secondary)	1	28	80
Instructors of vocational agriculture (postsecondary)	1	11	41
College professors, agricultural education	1	6	18
College professors, extension education	7	14	6
N=327 Total	69	107	151

$\chi^2 = 173.25$. Significant at .001.

Table 25-C provides data to indicate instructors of secondary and postsecondary agriculture felt it was essential to have the ability to construct an essay test. County extension agents did not feel it was necessary. The significant difference shown was the basis for rejecting the null hypothesis.

Table 25-C

Category: Methods and Techniques

Construct and use various kinds of tests such as: essay

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	58	53	2
Instructors of vocational agriculture (secondary)	2	32	75
Instructors of vocational agriculture (postsecondary)	1	10	42
College professors, agricultural education	1	6	18
College professors, extension education	8	15	4
N=327 Total	70	116	141

$\chi^2 = 181.40$. Significant at .001.

Table 33-C indicates that instructors of secondary and post-secondary agriculture felt the ability to arrange a schedule of work experiences for the learner was essential while county extension agents felt it was not necessary and the null hypothesis was rejected.

Table 33-C

Category: Methods and Techniques

Arrange a schedule of work experiences for the learner

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	22	60	31
Instructors of vocational agriculture (secondary)	4	27	78
Instructors of vocational agriculture (postsecondary)	1	15	37
College professors, agricultural education	0	3	22
College professors, extension education	1	8	18
N=327 Total	28	113	186

$\chi^2 = 70.75$. Significant at .001.

Table 37-C indicates that secondary and postsecondary instructors of agriculture recognize it is essential to recognize each student's or person's background and experience during the learning situation. County extension agents responded to need to know but not necessary with greater than expected frequency accounting for the significant difference. The null hypothesis was rejected.

Table 37-C

Category: Methods and Techniques

Determine which method or technique to use during the educational process depending on where the learner is: awareness, interest, appraisal, trial, adoption or integration

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	3	58	52
Instructors of vocational agriculture (secondary)	3	13	93
Instructors of vocational agriculture (postsecondary)	0	8	45
College professors, agricultural education	0	2	23
College professors, extension education	0	8	19
N=327 Total	6	89	232

$\chi^2 = 58.74$. Significant at .001.

Table 38-C provides evidence that instructors of secondary and postsecondary vocational agriculture felt their ability to prepare units and materials for teaching was essential while more than expected frequencies indicated county extension agents felt they need to know but was not essential. The null hypothesis was rejected.

Table 38-C

Category: Methods and Techniques

Prepare units and materials for teaching

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	5	44	64
Instructors of vocational agriculture (secondary)	0	5	104
Instructors of vocational agriculture (postsecondary)	0	3	50
College professors, agricultural education	0	2	23
College professors, extension education	0	7	20
N=327 Total	5	61	261

$\chi^2 = 65.94$. Significant at .001.

Table 50-C indicates that instructors of secondary and post-secondary agriculture felt it was essential to have the ability to maintain discipline during teaching-learning situations. County extension agents responded to not necessary or need to know but not essential with greater than expected frequency accounting for the significant difference and the rejection of the null hypothesis.

Table 50-C

Category: Methods and Techniques

Maintain discipline during teaching-learning situations

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	13	44	56
Instructors of vocational agriculture (secondary)	2	4	103
Instructors of vocational agriculture (postsecondary)	0	5	48
College professors, agricultural education	0	3	22
College professors, extension education	9	8	10
N=327 Total	24	64	239

$\chi^2 = 101.57$. Significant at .001.

Table 57-C shows that instructors of secondary and postsecondary agriculture felt it was essential to have the ability to present a shop demonstration (agricultural mechanics). County extension agents did not feel this competency was necessary therefore the null hypothesis was rejected.

Table 57-C

Category: Methods and Techniques

Present a shop demonstration (agriucltural mechanics)

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	53	53	4
Instructors of vocational agriculture (secondary)	0	12	97
Instructors of vocational agriculture (postsecondary)	10	17	26
College professors, agricultural education	0	6	19
College professors, extension education	14	11	2
N=327 Total	80	99	148

χ^2 = 199.31. Significant at .001.

Table 59-C indicates that instructors of secondary and post-secondary agriculture agree that the ability to coordinate and supervise occupational experience programs for students was essential. County extension agents did not feel this was necessary and the null hypothesis was rejected.

Table 59-C

Category: Methods and Techniques

Coordinate and supervise occupational experience programs for students

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	50	51	12
Instructors of vocational agriculture (secondary)	6	29	74
Instructors of vocational agriculture (postsecondary)	3	21	29
College professors, agricultural education	0	4	21
College professors, extension education	10	17	0
N=327 Total	69	122	136

$\chi^2 = 137.28$. Significant at .001.

Table 11-D shows instructors of secondary and postsecondary agriculture felt it was essential to have the ability to arrive at an objective evaluation or grades to determine student performance. The majority of county extension agents felt this competency was not necessary and the null hypothesis was rejected.

Table 11-D

Category: Evaluation of Local Program

Arrive at an objective evaluation or grades to determine student performance

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	63	35	15
Instructors of vocational agriculture (secondary)	1	15	93
Instructors of vocational agriculture (postsecondary)	1	8	44
College professors, agricultural education	0	1	24
College professors, extension education	10	9	8
N=327 Total	75	68	184

$\chi^2 = 179.52$. Significant at .001.

Table 12-D indicates that instructors of secondary and post-secondary agriculture felt it was essential to have the ability to plan evaluation devices and systems appropriate to measure whether the educational program has been successful. Extension agents responded in the not necessary and need to know but not necessary columns with greater than expected frequencies. This accounted for the significance for rejecting the null hypothesis.

Table 12-D

Category: Evaluation of Local Program

Plan evaluation devices and systems appropriate to measure whether the educational program has been successful

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	12	56	45
Instructors of vocational agriculture (secondary)	3	26	80
Instructors of vocational agriculture (postsecondary)	0	10	43
College professors, agricultural education	0	1	24
College professors, extension education	0	5	22
N=327 Total	15	98	214

$\chi^2 = 58.40$. Significant at .001.

Table 15-D provides evidence that instructors of secondary and postsecondary agriculture felt it was essential to use cumulative records or check lists to measure progress of students and programs. The majority of county extension agents did not feel this competency was necessary, hence the null hypothesis was rejected.

Table 15-D

Category: Evaluation of Local Program

Use cumulative records or check lists to measure programs of students or programs

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	46	43	24
Instructors of vocational agriculture (secondary)	4	40	65
Instructors of vocational agriculture (postsecondary)	3	22	28
College professors, agricultural education	0	6	19
College professors, extension education	5	13	9
N=327 Total	58	124	145

$\chi^2 = 83.42$. Significant at .001.

APPENDIX F

Professional Competencies Essential for Instructors of Postsecondary Vocational Agriculture

Table 26-C indicates the instructors of postsecondary agriculture felt the ability to use standardized test results was essential. County agents and secondary instructors of agriculture were not in agreement and the null hypothesis was rejected.

Table 26-C

Category: Methods and Techniques

Use standardized test results

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	62	43	8
Instructors of vocational agriculture (secondary)	19	49	41
Instructors of vocational agriculture (postsecondary)	6	20	27
College professors, agricultural education	2	5	18
College professors, extension education	8	13	6
N=327 Total	97	130	100

$\chi^2 = 87.47$. Significant at .001.

Table 49-C indicates that instructors of postsecondary agriculture felt the ability to take pictures for use as slide sets for teaching was essential. County extension agents and instructors of secondary agriculture did not feel this competency was essential, however, many responded to the need to know but not essential. The null hypothesis was rejected.

Table 49-C

Category: Methods and Techniques

Take pictures for use as slide sets for teaching

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	4	55	54
Instructors of vocational agriculture (secondary)	8	48	53
Instructors of vocational agriculture (postsecondary)	0	15	38
College professors, agricultural education	2	5	18
College professors, extension education	3	16	8
N=327 Total	17	139	171

$\chi^2 = 23.90$. Significant at .01.

APPENDIX G

Professional Competencies Essential for County Extension Agents

Table 1-A indicates that county agents felt it was essential to have knowledge of the organizational structure and legal basis that governs the agency for which you work. Other respondents left this in the need to know but not essential column. The null hypothesis was rejected.

Table 1-A

Category: Analysis of the Situation in Your Community

The organizational structure and legal basis that governs the agency for which you work

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	1	21	91
Instructors of vocational agriculture (secondary)	6	55	48
Instructors of vocational agriculture (postsecondary)	3	26	24
College professors, agricultural education	0	5	20
College professors, extension education	1	3	23
N=327 Total	11	110	206

$\chi^2 = 48.84$. Significant at .001.

Table 2-A indicates that knowledge of the history, objectives, and organization of the agency for which you work was essential for county extension agents. This was unimportant to the other respondent groups and the null hypothesis was rejected.

Table 2-A

Category: Analysis of the Situation in Your Community

History, objectives, and organization of the agency for which you work

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	0	46	67
Instructors of vocational agriculture (secondary)	10	60	39
Instructors of vocational agriculture (postsecondary)	5	29	19
College professors, agricultural education	0	10	15
College professors, extension education	0	7	20
N=327 Total	15	152	160

$\chi^2 = 33.57$. Significant at .001.

Table 3-A shows that knowledge of your relationship with all the various departments within the Land Grant University was essential for county extension agents. The significant difference accounted for the rejection of the null hypothesis.

Table 3-A

Category: Analysis of the Situation in Your Community

Your relationship with all the various departments within the Land Grant University

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	3	43	67
Instructors of vocational agriculture (secondary)	11	68	30
Instructors of vocational agriculture (postsecondary)	10	31	12
College professors, agricultural education	2	11	12
College professors, extension education	1	14	12
N=327 Total	27	167	133

$\chi^2 = 38.87$. Significant at .001.

Table 4-A shows that knowledge of your relationship to the Land Grant University and the U. S. Department of Agriculture was essential to county extension agents. This was not essential to the majority of the other groups and null hypothesis was rejected.

Table 4-A

Category: Analysis of the Situation in Your Community

Your relationship to the Land Grant University and the U. S. Department of Agriculture

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	0	29	84
Instructors of vocational agriculture (secondary)	10	70	29
Instructors of vocational agriculture (postsecondary)	8	30	15
College professors, agricultural education	1	7	17
College professors, extension education	1	4	22
N=327 Total	20	140	167

$\chi^2 = 80.44$. Significant at .001.

Table 7-A provides evidence that county extension agents felt it was essential to know about the status dimension, class differences and social strata of the people in the community. The null hypothesis was rejected.

Table 7-A

Category: Analysis of the Situation in Your Community

The status dimension, class differences and social strata of the people in the community

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	4	44	65
Instructors of vocational agriculture (secondary)	6	45	58
Instructors of vocational agriculture (postsecondary)	12	30	11
College professors, agricultural education	2	13	10
College professors, extension education	0	3	24
N=327 Total	24	135	168

$\chi^2 = 50.04$. Significant at .001.

Table 9-A shows that county extension agents felt it was essential to know who makes the important decisions in the community (Power Structure). The other respondent groups did not feel this competency was as important, however, the secondary instructors indicated, although fewer than expected, that it may also be important. The null hypothesis was rejected.

Table 9-A

Category: Analysis of the Situation in Your Community

Who makes the important decision in the community?
(Power Structure)

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	0	33	80
Instructors of vocational agriculture (secondary)	7	44	58
Instructors of vocational agriculture (postsecondary)	9	27	17
College professors, agricultural education	0	9	16
College professors, extension education	0	4	23
N=327 Total	16	117	194

$\chi^2 = 46.11$. Significant at .001.

Table 13-A provides evidence that county extension agents felt it was essential to know the role and function of other existing agencies in their community such as schools, churches, recreational facilities, health services, government agencies, etc. The significance indicated was the basis for rejecting the null hypothesis.

Table 13-A

Category: Analysis of the Situation in Your Community

The role or function of other existing agencies in your community such as schools, churches, recreational facilities, health services, government agencies, etc.

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	0	46	67
Instructors of vocational agriculture (secondary)	3	59	47
Instructors of vocational agriculture (postsecondary)	7	28	18
College professors, agricultural education	1	8	16
College professors, extension education	0	7	20
N=327 Total	11	148	168

$\chi^2 = 35.85$. Significant at .001.

It is evident as shown in Table 28-A that county extension agents felt the ability to interpret local and national surveys and research findings for local application was essential. The difference in the other respondents was evidence to reject the null hypothesis.

Table 28-A

Category: Analysis of the Situation in Your Community

Interpret local and national surveys and research findings for local application

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	6	44	63
Instructors of vocational agriculture (secondary)	14	60	35
Instructors of vocational agriculture (postsecondary)	6	29	18
College professors, agricultural education	0	6	19
College professors, extension education	0	5	22
N=327 Total	26	144	157

$\chi^2 = 40.18$. Significant at .001.

Table 2-B indicates the majority of the respondent groups consider the ability to present data about the local situation to planning groups as essential. The difference noted was due to the instructors of agriculture responded slightly more than expected in the need to know but not essential column. The null hypothesis was rejected; however, the statistically expected frequences of the instructors of secondary vocational agriculture account for the significant difference the majority also felt it was essential.

Table 2-B

Category: Planning the Educational Program

Present data about your local situation to planning groups

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	0	18	85
Instructors of vocational agriculture (secondary)	8	34	67
Instructors of vocational agriculture (postsecondary)	1	17	35
College professors, agricultural education	0	5	20
College professors, extension education	0	4	23
N=327 Total	9	78	240

$\chi^2 = 25.96$. Significant at .01.

Table 7-B indicates that county extension agents felt it was essential for them to have the ability to summarize the facts and background information and relate them to the local community. Since the other groups felt this was less important the null hypothesis was rejected.

Table 7-B

Category: Planning the Educational Program

Summarize the facts and background information and relate them to the local community

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	0	34	79
Instructors of vocational agriculture (secondary)	6	55	48
Instructors of vocational agriculture (postsecondary)	2	27	24
College professors, agricultural education	0	7	18
College professors, extension education	0	5	22
N=327 Total	8	128	191

$\chi^2 = 31.36$. Significant at .001.

Table 27-C shows it was essential for county extension agents to have the ability to train local leaders so they can assist with local educational programs. The null hypothesis was rejected because the instructors of secondary and postsecondary vocational education indicated this competency was unnecessary.

Table 27-C

Category: Methods and Techniques

Train local leaders so they can assist with local educational programs

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	3	18	92
Instructors of vocational agriculture (secondary)	11	67	31
Instructors of vocational agriculture (postsecondary)	13	29	11
College professors, agricultural education	1	9	15
College professors, extension education	0	5	22
N=327 Total	28	128	171

$\chi^2 = 104.27$. Significant at .001.

Table 29-C provides evidence that county extension agents felt it was essential to have the ability to work effectively with large groups in informal programs or public meetings. The null hypothesis was rejected because the instructors of secondary and postsecondary agriculture responded with greater than expected frequency to need to know but not essential.

Table 29-C

Category: Methods and Techniques

Work effectively with large groups in informal programs or public meetings

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	0	24	89
Instructors of vocational agriculture (secondary)	6	46	57
Instructors of vocational agriculture (postsecondary)	5	27	21
College professors, agricultural education	0	3	22
College professors, extension education	0	4	23
N=327 Total	11	104	212

$\chi^2 = 47.16$. Significant at .001.

Table 41-C provides evidence that county extension agents felt the ability to organize and conduct field days to explain the results of approved practices to the public was essential. The instructors of secondary and postsecondary vocational agriculture responded slightly less frequently to the essential and more frequently to the not essential columns, which accounted for the statistical difference. Hence, the rejection of the null hypothesis.

Table 41-C

Category: Methods and Techniques

Organize and conduct field days to explain the results of approved practices to the public

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	0	21	92
Instructors of vocational agriculture (secondary)	5	45	59
Instructors of vocational agriculture (postsecondary)	4	20	29
College professors, agricultural education	0	3	22
College professors, extension education	0	10	17
N=327 Total	9	99	219

$\chi^2 = 33.02$. Significant at .001.

Table 42-C shows that county agents felt it was essential to have the ability to maintain an office with regular hours and adequate materials to meet public demands. This competency was not necessary for instructors of vocational agriculture. The null hypothesis was rejected.

Table 42-C

Category: Methods and Techniques

Maintain an office with regular hours and adequate materials to meet public demands

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	0	4	109
Instructors of vocational agriculture (secondary)	19	45	45
Instructors of vocational agriculture (postsecondary)	5	23	25
College professors, agricultural education	0	6	19
College professors, extension education	1	4	22
N=327 Total	25	82	220

$\chi^2 = 95.06$. Significant at .001.

Table 45-C indicates that county extension agents felt it was essential to have the ability to provide a systematic news and information program for all local media to reach all segments of the community (newspaper, radio, and television, etc.). The instructors of vocational agriculture indicated they need to know but it was unnecessary. The null hypothesis was rejected.

Table 45-C

Category: Methods and Techniques

Provide a systematic news and information program for all local media to reach all segments of the community (newspaper, radio, and television, etc.)

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	0	13	100
Instructors of vocational agriculture (secondary)	11	40	58
Instructors of vocational agriculture (postsecondary)	4	29	20
College professors, agricultural education	0	6	19
College professors, extension education	3	3	21
N=327 Total	18	91	218

$\chi^2 = 62.74$. Significant at .001.

Table 16-D shows that county extension agents felt it was essential to have the ability to make annual reports to the public. Instructors of vocational agriculture felt this was unnecessary and the null hypothesis was rejected.

Table 16-D

Category: Evaluation of Local Program

Make annual reports to the public

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	2	33	78
Instructors of vocational agriculture (secondary)	12	58	39
Instructors of vocational agriculture (postsecondary)	8	34	11
College professors, agricultural education	0	11	14
College professors, extension education	1	5	21
N=327 Total	23	141	163

$\chi^2 = 56.94$. Significant at .001.

Table 8-F provides evidence that county extension agents felt it was essential to have the ability to delegate authority to co-workers on their staff. Both instructors of postsecondary and secondary agriculture indicated this competency was also important to them but their response to need to know but not essential provided the significant difference shown and was the basis for rejecting the null hypothesis.

Table 8-F

Category: Personal Characteristics

Ability to delegate authority to co-workers on your staff

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	1	10	102
Instructors of vocational agriculture (secondary)	9	26	74
Instructors of vocational agriculture (postsecondary)	3	9	41
College professors, agricultural education	0	0	25
College professors, extension education	0	3	24
N=327 Total	13	48	266

$\chi^2 = 28.04$. Significant at .001.

APPENDIX H

Professional Competencies Identified as "Need to Know But Not Essential" for All Groups

Table 8-A indicates that the majority of the respondent groups except the college professors felt the interrelationships of the small community to the larger community or trade area should be in the need to know or not essential column. The null hypothesis was rejected however upon careful analysis of the frequency table it was evident that all groups were agreed they need to know but it was not essential.

Table 8-A

Category: Analysis of the Situation in Your Community

The interrelationships of the small community groups to the larger community or trade area

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	4	55	54
Instructors of vocational agriculture (secondary)	9	66	34
Instructors of vocational agriculture (postsecondary)	10	29	14
College professors, agricultural education	2	8	15
College professors, extension education	0	8	19
N=327 Total	25	166	136

$\chi^2 = 34.00$. Significant at .001.

Table 11-A indicates that all respondent groups felt that knowledge of the trend of how agricultural adult education has developed over the years was needed but not essential. The difference indicated the null hypothesis should be rejected, however, an analysis of the frequency table accounts for the competency being assigned to the need to know but not essential for all groups.

Table 11-A

Category: Analysis of the Situation in Your Community

Knowledge of the trend of how agricultural adult education has developed over the years

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	5	73	35
Instructors of vocational agriculture (secondary)	7	64	38
Instructors of vocational agriculture (postsecondary)	7	28	18
College professors, agricultural education	0	9	16
College professors, extension education	2	15	10
N=327 Total	21	189	117

$\chi^2 = 15.75$. Significant at .05.

Table 15-A indicates that the respondent groups felt they needed to know but it was not essential they have a knowledge of the historical background of the community or area. The null hypothesis was rejected.

Table 15-A

Category: Analysis of the Situation in Your Community

The historical background of the community or area

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	7	81	25
Instructors of vocational agriculture (secondary)	16	71	22
Instructors of vocational agriculture (postsecondary)	13	33	7
College professors, agricultural education	0	19	6
College professors, extension education	2	14	11
N=327 Total	38	218	71

$\chi^2 = 22.94$. Significant at .01.

Table 16-A indicates all respondent groups felt that knowledge of the income variations of the people within the community (degree of wealth or poverty) were in the need to know but not essential column. This difference observed by the Chi Square test was due to the college professors in extension education felt it was essential and the more than expected frequencies by postsecondary teachers in the not necessary column. Therefore, the null hypothesis was rejected.

Table 16-A

Category: Analysis of the Situation in Your Community

The income variations of the people within the community (degree of wealth or poverty)

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	7	55	51
Instructors of vocational agriculture (secondary)	9	59	41
Instructors of vocational agriculture (postsecondary)	16	31	6
College professors, agricultural education	0	15	10
College professors, extension education	0	9	18
N=327 Total	32	169	126

$\chi^2 = 49.32$. Significant at .001.

Table 18-A indicates that most respondent groups felt the degree of mobility of the community was not essential and responded to the need to know but not essential column. The difference was noted by higher than expected frequencies of instructors of agriculture in the not necessary column. The null hypothesis was rejected.

Table 18-A

Category: Analysis of the Situation in Your Community

The degree of mobility of the community

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	8	74	31
Instructors of vocational agriculture (secondary)	26	66	17
Instructors of vocational agriculture (postsecondary)	19	28	6
College professors, agricultural education	1	10	14
College professors, extension education	1	15	11
N=327 Total	55	193	79

$\chi^2 = 49.96$. Significant at .001.

Table 24-A indicates that the respondent groups felt the ability to understand the population fluctuations and trends within the community was not essential. Significant differences indicated the null hypothesis should be rejected even though the groups generally agreed the competency was not essential.

Table 24-A

Category: Analysis of the Situation in Your Community

Understand the population fluctuations and trends within the community

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	4	55	54
Instructors of vocational agriculture (secondary)	14	66	29
Instructors of vocational agriculture (postsecondary)	7	33	13
College professors, agricultural education	1	10	14
College professors, extension education	0	12	15
N=327 Total	26	176	125

$\chi^2 = 27.37$. Significant at .001.

Table 31-A indicates the respondent groups except for the college professors in agricultural education agreed that the ability to conduct a community survey and organize the data for community needs analysis would be in the need to know but not necessary column. The difference shown provided evidence to reject the null hypothesis but place the competency into the central core need to know but not essential group.

Table 31-A

Category: Analysis of the Situation in Your Community

Conduct a community survey and organize the data for community needs analysis

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	5	74	34
Instructors of vocational agriculture (secondary)	10	56	43
Instructors of vocational agriculture (postsecondary)	13	26	14
College professors, agricultural education	2	6	17
College professors, extension education	1	12	14
N=327 Total	31	174	122

$\chi^2 = 35.81$. Significant at .001.

Table 32-A provides evidence that the majority of the respondents felt the ability to work with differentiated staff patterns and paraprofessionals should be in the need to know but not essential column. College professors felt this should be in the essential column, accounting for most of the significant difference indicated. The null hypothesis was rejected and the competency was assigned to the need to know but not necessary group.

Table 32-A

Category: Analysis of the Situation in Your Community

Work with differentiated staff patterns and paraprofessionals

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	7	68	38
Instructors of vocational agriculture (secondary)	18	54	37
Instructors of vocational agriculture (postsecondary)	4	26	23
College professors, agricultural education	1	10	14
College professors, extension education	0	5	22
N=327 Total	30	163	134

$\chi^2 = 34.15$. Significant at .001.

Table 33-A indicates that the majority of the county extension agents and instructors of vocational agriculture felt the ability to use the scientific method to determine the situation (data collection through interpretation and reporting) should be in the need to know but not essential column. The college professors again felt this should be in the essential area, accounting for a significant difference. The null hypothesis was rejected and the analysis of the frequency table provided evidence that the competency was needed but not essential.

Table 33-A

Category: Analysis of the Situation in Your Community

How to use the scientific method to determine the situation (data collection through interpretation and reporting)

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	11	52	50
Instructors of vocational agriculture (secondary)	21	66	22
Instructors of vocational agriculture (postsecondary)	5	35	13
College professors, agricultural education	0	6	19
College professors, extension education	2	4	21
N=327 Total	39	163	125

$\chi^2 = 58.06$. Significant at .001.

Table 13-B indicates by all respondents except college professors that the ability to develop the components of a behavior objective would be classified in the need to know but not essential group. The difference indicated the null hypothesis should be rejected however, the analysis of the frequency table indicated the groups agreed that they need to know but it was not essential.

Table 13-B

Category: Planning the Educational Program

Develop the components of a behavioral objective

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	8	74	31
Instructors of vocational agriculture (secondary)	9	47	53
Instructors of vocational agriculture (postsecondary)	1	19	33
College professors, agricultural education	0	5	20
College professors, extension education	0	5	22
N=327 Total	18	150	159

$\chi^2 = 48.52$. Significant at .001.

Table 31-C indicated the respondent groups felt the ability to practice group dynamics for teaching in informal groups was essential. The significance shown was the result of all groups indicating slightly less than expected in the essential and slightly more than expected in the need to know but not essential column. The null hypothesis that no differences existed was rejected. However, an analysis of the frequency table provides evidence that slightly more responses were in the need to know but not essential and not necessary column.

Table 31-C

Category: Methods and Techniques

Practice the skills of group dynamics for teaching in informal groups

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	6	51	56
Instructors of vocational agriculture (secondary)	5	50	54
Instructors of vocational agriculture (postsecondary)	2	25	26
College professors, agricultural education	0	3	22
College professors, extension education	0	5	22
N=327 Total	13	134	180

$\chi^2 = 22.66$. Significant at .01.

Table 43-C indicates the majority of the respondent groups agreed that the ability to use programmed materials for individualized learning situations would fall in the need to know but not essential column. Professors of agricultural education considered it essential. The significant difference provided evidence to reject the null hypothesis and an analysis of the data indicates the competency should be placed in the need to know but not essential group.

Table 43-C

Category: Methods and Techniques

Use programmed materials for individualized learning situations

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	10	63	40
Instructors of vocational agriculture (secondary)	12	47	50
Instructors of vocational agriculture (postsecondary)	3	24	26
College professors, agricultural education	0	7	18
College professors, extension education	2	18	7
N=327 Total	27	159	141

$\chi^2 = 18.42$. Significant at .02.

Table 46-C provides evidence that the ability to present regularly scheduled radio programs would not be essential but rather in the need to know but not essential column. The higher than expected responses in the not necessary for my job column by the instructors of secondary and postsecondary vocational agriculture account for the significance for rejecting the null hypothesis. An analysis of the data indicated the competency should be placed in the need to know but not essential group.

Table 46-C

Category: Methods and Techniques

Present regularly scheduled radio programs as part of the education program (at least a weekly program)

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	7	60	46
Instructors of vocational agriculture (secondary)	50	49	10
Instructors of vocational agriculture (postsecondary)	25	26	2
College professors, agricultural education	5	16	4
College professors, extension education	3	14	10
N=327 Total	90	165	72

$\chi^2 = 81.63$. Significant at .001.

Table 48-C indicates that all respondent groups agreed that the ability to take pictures for all types of mass media was in the need to know but not essential column and provided evidence to accept the null hypothesis.

Table 48-C

Category: Methods and Techniques

Take pictures for all types of mass media

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	14	59	40
Instructors of vocational agriculture (secondary)	22	45	42
Instructors of vocational agriculture (postsecondary)	10	31	12
College professors, agricultural education	4	14	7
College professors, extension education	4	18	5
N=327 Total	54	167	106

$\chi^2 = 11.22$. Not significant at .05.

Table 51-C shows that all respondent groups except the college professors of agricultural education felt the ability to plan and construct a public educational display was in the need to know but not essential group. No significant difference indicated and the null hypothesis was accepted.

Table 51-C

Category: Methods and Techniques

Plan and construct public educational displays

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	7	51	55
Instructors of vocational agriculture (secondary)	7	51	51
Instructors of vocational agriculture (postsecondary)	6	27	20
College professors, agricultural education	0	9	16
College professors, extension education	3	17	7
N=327 Total	23	155	149

$\chi^2 = 11.43$. Not significant at .05.

Table 52-C indicates all respondent groups felt the ability to prepare the art work and make up an exhibit was in the need to know but not essential column. The significance shown was due to a higher than expected response of not necessary responses by county extension agents and professors of extension education. The null hypothesis was rejected.

Table 52-C

Category: Methods and Techniques

Prepare the art work and make up an exhibit

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need to Know But Not Essential	Essential
County extension agents	29	71	13
Instructors of vocational agriculture (secondary)	31	54	24
Instructors of vocational agriculture (postsecondary)	11	32	10
College professors, agricultural education	2	18	5
College professors, extension education	10	17	0
N=327 Total	83	192	52

$\chi^2 = 16.81$. Significant at .05.

Table 58-C indicates that instructors of vocational agriculture would place the ability to use the dictionary of occupational titles in the need to know but not essential column. Most county extension agents felt it was not necessary for their job which provided evidence that significant differences were present and the null hypothesis was rejected. The majority of all except extension agents responded to need to know but not essential.

Table 58-C

Category: Methods and Techniques

Use the dictionary of occupational titles

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	59	51	3
Instructors of vocational agriculture (secondary)	10	66	33
Instructors of vocational agriculture (postsecondary)	9	27	17
College professors, agricultural education	0	11	14
College professors, extension education	9	18	0
N=327 Total	87	173	67

$\chi^2 = 100.16$. Significant at .001.

Table 9-D shows that the respondent groups except college professors felt the ability to construct and use a performance evaluation instrument was in the need to know but not essential category. The null hypothesis was rejected and the competency was judged to fit the need to know but not necessary column.

Table 9-D

Category: Evaluation of Local Program

Construct and use a performance evaluation instrument

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	19	65	29
Instructors of vocational agriculture (secondary)	5	54	50
Instructors of vocational agriculture (postsecondary)	0	20	33
College professors, agricultural education	0	5	20
College professors, extension education	1	11	15
N=327 Total	25	155	147

$\chi^2 = 48.49$. Significant at .001.

APPENDIX I

Professional Competencies Identified as "Not Necessary"

Table 17-A indicates that all groups felt it was unnecessary to know how long people have lived in the community. The higher than expected frequencies of not necessary responses by the instructors of postsecondary and secondary agriculture accounted for the significant difference. The null hypothesis was rejected.

Table 17-A

Category: Analysis of the Situation in Your Community

Knowledge of how long people have lived in the community

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	28	74	11
Instructors of vocational agriculture (secondary)	39	59	11
Instructors of vocational agriculture (postsecondary)	28	22	3
College professors, agricultural education	4	19	2
College professors, extension education	2	21	4
N=327 Total	101	195	31

$\chi^2 = 25.56$. Significant at .05.

Table 47-C indicates that all respondent groups felt the ability to present regularly scheduled television programs as a regular part of the educational program (at least a monthly program) was not necessary for their job. The null hypothesis was rejected.

Table 47-C

Category: Methods and Techniques

Present regularly scheduled television programs as a regular part of the education program (at least a monthly program)

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	37	63	13
Instructors of vocational agriculture (secondary)	58	43	8
Instructors of vocational agriculture (postsecondary)	31	20	2
College professors, agricultural education	5	17	3
College professors, extension education	2	17	8
N=327 Total	133	160	34

$\chi^2 = 40.47$. Significant at .001.

Table 53-C indicates that all groups felt it was not necessary to have the ability to write educational bulletins and educational materials. An analysis of the data indicates that a high majority of the respondents did not feel the competency was essential.

Table 53-C

Category: Methods and Techniques

Write educational bulletins and other educational materials

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	29	64	20
Instructors of vocational agriculture (secondary)	47	47	15
Instructors of vocational agriculture (postsecondary)	21	20	12
College professors, agricultural education	0	15	10
College professors, extension education	6	14	7
N=327 Total	103	160	64

$\chi^2 = 28.00$. Significant at .001.

Table 10-D indicates that instructors of vocational agriculture felt they may need to know but it was not necessary to have the ability to select and administer the proper standardized tests. County extension agents rejected this competency. The null hypothesis was rejected.

Table 10-D

Category: Evaluation of Local Program

Select and administer the proper standardized tests

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	73	36	4
Instructors of vocational agriculture (secondary)	33	58	18
Instructors of vocational agriculture (postsecondary)	13	28	12
College professors, agricultural education	1	13	11
College professors, extension education	8	14	5
N=327 Total	128	149	50

$\chi^2 = 65.28$. Significant at .001.

Table 14-D provides evidence that a high majority of the respondents felt the ability to apply statistical procedures when interpreting evaluative data was not essential for their job. The null hypothesis was rejected.

Table 14-D

Category: Evaluation of Local Program

Apply statistical procedures when interpreting evaluative data

Respondent Groups	Frequencies In Each Group		
	Not Necessary	Need To Know But Not Essential	Essential
County extension agents	42	50	21
Instructors of vocational agriculture (secondary)	20	63	26
Instructors of vocational agriculture (postsecondary)	7	28	18
College professors, agricultural education	1	13	11
College professors, extension education	4	14	9
N=327 Total	74	168	85

$\chi^2 = 27.65$. Significant at .001.

APPENDIX J

Questionnaire and Cover Letters

Punching and Coding Scheme

PROFESSIONAL COMPETEN… be very helpful.

NOTE: Your name and address are not necessary but would

Title_____

Name_____ Zip Code_____

Address_____

DO NOT WRITE IN THIS SPACE

(Please complete the following statements as they apply to you.)

1. Your Age (Check One)
   - Under 30 years of age
   - 30-39
   - 40-49
   - 50-59
   - 60 years or over

2. Your Educational Background (Check one, only, the highest you have attained)
   - Less than baccalaureate degree
   - Baccalaureate degree
   - Baccalaureat degree plus some graduate work
   - Master's degree
   - Master's plus some graduate work
   - Doctorate degree
   - Other

3. Your major fields of study. Indicate the major field for each degree you have earned. (Examples: Baccalaureate degree-Vocational Agricultural Education; Master's Degree-Animal Science)
   - Baccalaureate Degree _____
   - Master's Degree _____ 11 ( )
   - Doctorate Degree _____
   - Other (please designate) _____ 12 ( )

4. How long have you been working at your present job? (Check One)
   - 6-10 years
   - Less than 5 years — 13 ( )
   - 11-20 years
   - 21 years or more

5. Please indicate the past experience you have had in other jobs before your present job. **DO NOT INCLUDE YOUR PRESENT JOB.** (If none omit this question)

	Approx. No. of Years	
Instructor of vocational agriculture (secondary)	_____	14 ( ) 15 ( )
Instructor of vocational agriculture (postsecondary)	_____	16 ( )
Agricultural Extension Agent or other Extension.	_____	17 ( )
Other experiences (specify) _____	_____	18 ( )

INSTRUCTIONS

The following pages you will find a number of statements that relate to knowledge, understanding, skill, and ability that **may** or **may not** related to your job as a professional agricultural educator. For each statement (item) decide whether it is **not needed, need to know but essential,** or **essential for you** for the performance of your present job which may be Instructor of Vocational Agriculture at the secondary or secondary level, or a County Extension Agent. Please check (√) the degree of necessity as it applies to your present position.

Check one for each item:
- ☐ Not needed for the performance of my job.
- ☐ Need to know about this but it is not essential for the performance of my job.
- ☐ Essential for the performance of my job.

ANALYSIS OF THE SITUATION IN YOUR COMMUNITY*

DO NOT WRITE IN THIS SPACE

Knowledge of:	Please check one. Not needed for my job	Need to know but not essential	Essential for my job	
1. The organizational structure and legal basis that governs the agency for which you work.				27 ( )
2. History, objectives, and organization of the agency for which you work.				28 ( )
3. Your relationship with all the various departments within the land grant university.				29 ( )
4. Your relationship to the Land-Grant College and the U.S. Department of Agriculture.				30 ( )
5. Your relationship with the State Department of Education and the U.S. Office of Education.				31 ( )
6. The geographic location and ethnic groupings of the people who are living in your community.				32 ( )
7. The status dimension, class differences and social strata of the people in the community.				33 ( )
8. The interrelationships of the small community groups to the larger community or trade area.				34 ( )

(continued)

(Have you checked all items?

Community relates to your local school district, county or area where you work.

ANALYSIS OF THE SITUATION IN YOUR COMMUNITY (cont.)

DO NOT WRITE IN THIS SPACE

Please check one.

	Knowledge of: (cont.)	Not needed for my job	Need to know but not essential	Essential for my job
35 ( )	17. How long people have lived in the community.			
36 ( )	18. The degree of mobility of the community.			
37 ( )	19. The principal crops, livestock, and other production resources in the community.			
	Ability to:			
38 ( )	20. Secure leaders for participation from all strata within the community.			
39 ( )	21. Identify all community resources.			
40 ( )	22. Provide leadership and cooperation through work and planning with special commodity groups in the community.			
41 ( )	23. Understand employment opportunities and employment patterns within the community.			
42 ( )	24. Understand the population fluctuations and ternds within the community.			
43 ( )	25. Be cognizant and understanding of technological changes that influence curriculum and programs.			

Please check one.

	Ability to: (cont.)	Not needed for my job	Need to know but not essential	Essential for my job	DO NOT WRITE IN THIS SPACE
	26. Identify the handicapped and disadvantaged persons in the community to provide special emphasis and programs.				44 ( )
	27. Be sensitive to ethnic groups and their needs in your community.				45 ( )
	28. Interpret local and national surveys and research findings for local application.				46 ( )
	29. Identify the limiting factors which prevent or are in conflict with your educational programs.				47 ( )
	30. Identify and coordinate with other agencies or groups to prevent duplication of educational programs.				48 ( )
	31. Conduct a community survey and organize the data for community needs analysis.				49 ( )
	32. Work with differentiated staff patterns and paraprofessionals.				50 ( )
	33. How to use the scientific method to determine the situation (data collection through interpretation and reporting).				51 ( )
	34. Others (please list)				52 ( )

* Community relates to your school district, county, or area where you work.

PLANNING THE EDUCATIONAL PROGRAM

DO NOT WRITE IN THIS SPACE

Please check one.

	Ability to:	Not needed for my job	Need to know but not essential	Essential for my job
53 ( )	1. Solicit opinions from representatives of the planning groups and advisory committees to develop plans for one or more areas.			
54 ( )	2. Present data about your local situation to planning groups.			
55 ( )	3. Select and use representative advisory groups who are vitally interested in the decisions that affect their community.			
56 ( )	4. Plan programs for disadvantaged and handicapped.			
57 ( )	5. Organize advisory groups and conduct planning activities on a continuous basis (year around and year to year).			
58 ( )	6. Inform all publics about proposed educational programs to maintain public relations.			
59 ( )	7. Summarize the facts and background information and relate them to the local community.			
60 ( )	8. Utilize the advisory group to identify the problems pertinent to the community.			

Please check one.

	Ability to: (cont.)	Not needed for my job	Need to know but not essential	Essential for my job	DO NOT WRITE IN THIS SPACE
	9. Encourage the advisory group to identify proirities so that goals can be established.				61 ( )
	10. Select the goals the community needs as indicated by the priorities identified by advisory groups.				62 ( )
	11. Develop an annual plan of work or curriculum based on advisory group planning.				63 ( )
	12. Formulate performance-based objectives congruent with the goals.				64 ( )
	13. Develop the components of a behavioral objective.				65 ( )
	14. Formulate the objectives so the planning groups and advisory committees and persons participating will understand when they have reached them.				66 ( )
	15. Organize the facilities needed to carry out an agricultural education program.				67 ( )
	16. To plan an educational program consistent with the objectives selected.				68 ( )
	17. Others (please list).....				69 ( )

METHODS AND TEHCNIQUES

DO NOT WRITE IN THIS SPACE

1 ( )
2 ( )
3 ( )
4 ( )
5 ( )
6 ( )

Please check one.

	Knowledge of:	Not needed for my job	Need to know but not essential	Essential for my job
7 ( )	1. How adults influence learning and behavior of youth.			
	2. How the use of approved practices by youth can influence their parents and be a method of teaching.			

Please check one.

	Knowledge of: (cont.)	Not needed for my job	Need to know but not essential	Essential for my job	DO NOT WRITE IN THIS SPACE
	3. How the attitude of the learner affects the learning process.				8 ( )
	4. How people learn.				9 ( )
	5. How the use of verbal and nonverbal reinforcement facilitate learning.				10 ( )

(continued)

(Have you checked all items?

METHODS AND TECHNIQUES (cont.)

Knowledge of: (cont.)

Please check one.

	Not needed for my job	Need to know but not essential	Essential for my job	DO NOT WRITE IN THIS SPACE
6. The effect that motivations have on adult learning.				( )
7. The effect that youths motivations have on their learning.				( )
Ability to:				
Use various kinds of questions				( )
8. Such as: memory				( )
9. Such as: reasoning				( )
10. Such as: judgment				( )
11. Such as: creative thing				( )
12. How to involve planning groups and other leaders in implementing the educational program.				( )
13. How to work with existing local organizations to promote educational programs.				( )
Use various kinds of problem-solving teaching methods, such as:				
14. Steps and key points				( )
15. Possibilities and factors				( )
16. Advantages & disadvantages				( )
17. Present situation compared to ideal situation				( )
18. Question-answer discussion				( )
19. Lead a large group discussion.				( )
20. Lead a small group discussion.				( )
Construct and use various kinds of tests, such as:				
21. true-false				( )
22. matching questions				( )
23. short-answer				( )
24. multiple choice				( )
25. essay				( )
26. Use standardized test results.				( )
27. Train local leaders so they can assist with local educational programs.				( )
28. Use and teach basic parliamentary procedure skills.				( )
29. Work effectively with large groups in informal programs or public meetings.				( )
30. Provide an educational program consistent with the occupational opportunities within the community.				( )
31. Practice the skills of group dynamics for teaching in informal groups.				( )
32. Determine which method or technique to use during the educational process depending on where the learner is: (awareness, interest, appraisal, trial adoption, or integration).				( )
33. Arrange a schedule of work experiences for the learner.				( )
34. Make and use daily, monthly, and yearly activity schedules or calendars.				( )
35. Schedule educational programs and activities into a timely sequence.				( )

Ability to: (cont.)

Please check one.

	Not needed for my job	Need to know but not essential	Essential for my job	DO NOT WRITE IN THIS SPACE
36. Use audiovisual materials and equipment properly.				41 ( )
37. Recognize each student or person's background and experience during a learning situation.				42 ( )
38. Prepare units and materials for teaching.				43 ( )
39. Plan, organize, and conduct field trips with groups or individuals.				44 ( )
40. Provide the proper physical environment conducive to learning good light, warm building, etc.)				45 ( )
41. Organize and conduct field days to explain the results of approved practices to the public.				46 ( )
42. Maintain an office with regular hours and adequate materials to meet public demands.				47 ( )
43. Use programmed materials for individualized learning situations.				48 ( )
44. Maintain an adequate reference library.				49 ( )
45. Provide a systematic news and information program for all local media to reach all segments of the community (newspaper, radio, and television, etc.)				50 ( )
46. Present regularly scheduled radio programs as part of the education program (at least a weekly program).				51 ( )
47. Present regularly scheduled television programs as a regular part of the education program (at least a monthly program).				52 ( )
48. Take pictures for all types of mass media.				53 ( )
49. Take pictures for use as slide sets for teaching.				54 ( )
50. Maintain discipline during teaching-learning situations.				55 ( )
51. Plan and construct public educational displays.				56 ( )
52. Prepare the art work and make up an exhibit.				57 ( )
53. Write educational bulletins and other educational materials.				58 ( )
54. Serve as a counselor on an informal basis as the need arises				59 ( )
55. Plan and coordinate method demonstrations.				60 ( )
56. Conduct result demonstrations.				61 ( )
57. Present a shop demonstration (agricultural mechanics).				62 ( )
58. Use the dictionary of occupational titles.				63 ( )
59. Coordinate and supervise occupational experience programs for students.				64 ( )
60. Others (please list).....				65 ( )

EVALUATION OF LOCAL PROGRAM

Knowledge of:

Please check one.

	Not needed for my job	Need to know but not essential	Essential for my job	DO NOT WRITE IN THIS SPACE
1. Policies or practices in your community which may prevent the accomplishment of the stated objectives.				( )

Knowledge of: (cont.)

Please check one.

	Not needed for my job	Need to know but not essential	Essential for my job	DO NOT WRITE IN THIS SPACE
2. What standards are necessary to accomplish intended outcomes.				7 ( )
3. How to obtain and maintain public support for your program.				8 ( )

(continued)

(Have you checked all items?

EVALUATION OF LOCAL PROGRAM (cont.)

DO NOT WRITE IN THIS SPACE

Knowledge of: (cont.)

	Please check one.		
	Not needed for my job	Need to know but not essential	Essential for my job
9 ( ) 4. The conditions that existed at the time the goals were established.			
10 ( ) 5. Whether the goals you are striving to accomplish are the goals of your students or persons participating, or your own goals.			
11 ( ) 6. How to obtain the necessary feedback (approval or disapproval from your publics) during each stage of the program.			
12 ( ) 7. How to modify the program to maintain focus on the objective rather than let it fail.			
Ability to:			
13 ( ) 8. Recognize that some failures are beneficial.			
14 ( ) 9. Construct and use a performance evaluation instrument.			
15 ( ) 10. Select and administer the proper standardized tests.			

Ability to: (cont.)

	Please check one.		
	Not needed for my job	Need to know but not essential	Essential for my job
11. Arrive at an objective evaluation or grades to determine student performance.			
12. Plan evaluation devices and systems appropriate to measure whether the educational program has been successful.			
13. Understand and use proper reporting procedures for both local and state evaluation reports.			
14. Apply statistical procedures when interpreting evaluative data.			
15. Use cumulative records or check lists to measure progress of students or programs.			
16. Make annual reports to the public.			
17. Conduct follow-up studies.			
18. Evaluate source and reference materials before using them.			
19. Others (please list).....			

DO NOT WRITE IN THIS SPACE

16 ( )
17 ( )
18 ( )
19 ( )
20 ( )
21 ( )
22 ( )
23 ( )
24 ( )

RE-ANALYSIS OF LOCAL SITUATION

(Check to see if original situation has changed as a result of your program or other factors)

DO NOT WRITE IN THIS SPACE

Knowledge of:

	Please check one.		
	Not needed for my job	Need to know but not essential	Essential for my job
25 ( ) 1. The consequence of achieving the stated objectives of your program.			
26 ( ) 2. How to make comparisons over a period of time to determine what changes have really taken place.			
27 ( ) 3. Changes taking place in our society which may alter long-range and short-range objectives (i.e., drug problem, etc.)			
28 ( ) 4. How to involve planning groups on a continuous basis to provide reliable feed-back to a new situation and revised goals.			
29 ( ) 5. Whether the educational program has actually provided the knowledge and competencies needed for the participant so he can be successful.			

Knowledge of: (cont.)

	Please check one.		
	Not needed for my job	Need to know but not essential	Essential for my job
6. Whether changes in resources within your community have occurred to change the original situation.			
Ability to:			
7. Analyze the feedback (public or community acceptance or rejection) about your program outside the educational setting.			
8. Understand whether the people or students have changed to determine the next step for teaching.			
9. Work with advisory and/or planning groups to assist them to keep abreast of the changing situation.			
10. Encourage the planning groups and advisory committees to understand planning is a continuous process.			
11. Others (please list).....			

DO NOT WRITE IN THIS SPACE

30 ( )
31 ( )
32 ( )
33 ( )
34 ( )
35 ( )

PERSONAL CHARACTERISTICS

DO NOT WRITE IN THIS SPACE

Knowledge of:

	Please check one.		
	Not needed for my job	Need to know but not essential	Essential for my job
36 ( ) 1. Practice the techniques of good human relations.			
37 ( ) 2. Understand professional ethics and know its influence upon educators.			
38 ( ) 3. Understand that continuous study to acquire and use new knowledge is an important part of education.			
39 ( ) 4. To maintain human relations with co-workers.			
40 ( ) 5. To dress for the teaching situation.			
41 ( ) 6. Work closely with supervisory staff for both personal improvement and program improvement.			

Knowledge of: (cont.)

	Please check one.		
	Not needed for my job	Need to know but not essential	Essential for my job
7. Share feelings of others and understand their problems ("put yourself in the other person's shoes").			
Ability to:			
8. Delegate authority to co-workers on your staff.			
9. Sense the feelings and needs of the people within the community.			
10. Understand the role of your fellow-workers, teacher aides, and para-professionals.			
11. Understand that communication is a two-way process; talking and attentive listening.			
12. Others (please list).....			

DO NOT WRITE IN THIS SPACE

42 ( )
43 ( )
44 ( )
45 ( )
46 ( )
47 ( )

(Have you checked all items?

Cooperative
EXTENSION SERVICE
Kansas State University

Division of Extension
Extension Programs and Training
Umberger Hall
MANHATTAN, KANSAS 66502
Phone: 913 532-6141

"Taking the UNIVERSITY to the PEOPLE"

Dear Extension Educator:

You have been selected as one of the professional extension educators to assist in a Kansas-Nebraska competency study. You are asked to identify those competencies you feel are needed for the performance of your job.

Would you please take a few moments from your busy schedule to complete the enclosed questionnaire. This information will be held in strict professional confidence and will not reveal your individual program.

The results of this study will be used to assist with the planning of preparation programs at the college level. It does not attempt to deal with agricultural subject matter, only your opinion about professional competencies necessary to perform your job as an educator.

Please complete each question and return the questionnaire today in the self-addressed envelope, enclosed for your convenience.

Sincerely yours,

Ronald E. Stoller

RONALD E. STOLLER
Consultant, Vocational Education
Professions Development
Nebraska State Department of Education

Approval and Endorsement:

I have talked to Dr. Robert J. Florell and Dr. Wilbur E. Ringler about the value of this study. They have recommended it very highly and feel it would be helpful. The results of the study will be available to them for consideration of extension education programs.

Robert J. Florell

Dr. Robert J. Florell
State Leader of Studies and Training
Nebraska Cooperative Extension Service

Wilbur E Ringler

Dr. Wilbur E. Ringler
Assistant Director of Extension
Kansas Cooperative Extension Service

COOPERATIVE EXTENSION SERVICE

UNIVERSITY OF NEBRASKA EAST CAMPUS LINCOLN, NB 68503

Dear Extension Educator:

You have been selected as one of the professional extension educators to assist in a Kansas-Nebraska competency study. You are asked to identify those competencies you feel are needed for the performance of your job.

Would you please take a few moments from your busy schedule to complete the enclosed questionnaire. This information will be held in strict professional confidence and will not reveal your individual program.

The results of this study will be used to assist with the planning of preparation programs at the college level. It does not attempt to deal with agricultural subject matter, only your opinion about professional competencies necessary to perform your job as an educator.

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Sincerely yours,

Ronald E. Stoller

RONALD E. STOLLER
Consultant, Vocational Education
Professions Development
Nebraska State Department of Education

Approval and Endorsement:

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Robert J. Florell

Dr. Robert J. Florell
State Leader of Studies and Training
Nebraska Cooperative Extension Service

Wilbur E Ringler

Dr. Wilbur E. Ringler
Assistant Director of Extension
Kansas Cooperative Extension Service

THE UNIVERSITY OF NEBRASKA
COLLEGE OF AGRICULTURE AND HOME ECONOMICS
LINCOLN, NEBRASKA, 68503

DEPARTMENT OF AGRICULTURAL EDUCATION

Dear Agricultural Educator:

You have been selected as one of the professional agricultural educators to assist in a Kansas-Nebraska competency study. You are asked to identify those competencies you feel are needed for the performance of your job.

Would you please take a few moments from your busy schedule to complete the enclosed questionnaire. This information will be held in strict professional confidence and will not reveal your individual program.

The results of this study will be used to assist with the planning of preparation programs at the college level. It does not attempt to deal with agricultural subject matter, only your opinion about professional competencies necessary to perform your job as an educator.

Please complete each question and return the questionnaire today in the self-addressed envelope, enclosed for your convenience.

Sincerely yours,

Ronald E. Stoller

RONALD E. STOLLER
Consultant, Vocational Education
Professions Development
State Department of Education

Approval and Endorsement:

I have talked to Mr. E. E. Eustace, Mr. Burneil E. Gingery, Dr. James T. Horner, and Dr. James Albracht about the value of this study. They have recommended it very highly and feel it would be helpful. The results of the study will be available to them for consideration of teacher education programs.

E. E. Eustace
Kansas State Supervisor
Agricultural Education
State Department of Education

James Albracht

Dr. James Albracht
Coordinator of Agricultural Education
Department of Adult and Occupational Education
Kansas State University

B. E. Gingery

Burneil E. Gingery
Nebraska State Director
Agriculture Education
State Department of Education

James T. Horner

Dr. James T. Horner
Chairman
Department of Agricultural Education
University of Nebraska

You have been selected as one of thirty persons from college staff in U. S. to give your opinion about Professional Competencies needed by Agricultural Extension Agents.

Would you please take a few minutes from your busy schedule to complete the enclosed study questionnaire. Your opinions will be compared to county agents working in Kansas and Nebraska as well as vocational agriculture teachers to attempt to determine if differences exist. (The cover letter to the county agents is also enclosed.)

Please return in the enclosed self-addressed envelope today, or no later than April 5, 1971.

Sincerely yours,

RONALD E. STOLLER
Consultant, EPDA
Division of Instructional Services

RES:fh

Enclosures

You have been selected as one of thirty college professors concerned with Agricultural Education to give your opinion about the competencies necessary for an instructor of vocational agriculture.

I know you are very busy but would you please take a few minutes from your busy schedule to complete the enclosed questionnaire.

Your responses will be compared with the teachers in the field to determine if difference of opinion exists. (The cover letter to the Instructors of Vocational Agriculture is also enclosed.)

Your opinion will be invaluable for this study. Please return the enclosed questionnaire today, or no later than April 5, 1971.

Sincerely yours,

RONALD E. STOLLER
Consultant, EPDA
Division of Instructional Services

RES:fh

Enclosures

Professional Competencies For Agricultural Educators

Punching and Coding Scheme

Variable	Question	Code	Column	Range
Respondent ID		C.A. NB. 011-071	1 2 3	011-750
		C.A. Kans 111-171		
		V.A. NB. 211-271		
		V.A. Kan. 311-371		
		P.S. Nb. 411-445		
		P.S. Kans 511-545		
		Coll. Ext. 611-650		
		Coll. V.A. 711-750		
Record or Card No.			4	1-3
State		1 Nb.	5	1-2
		2 Kan.		
Group	Color Code	-1 C.A.	6	1-5
	W	-2 V.A. Sec		
	Y	-3 V.A. Postsec		
	B	-4 Coll. A.Ed.		
	P	-5 Coll. Ext. Ed.		
	G			
Age	1	1	7	1-6
		2		
		3		
		4		
		5		
		6		

Variable	Question	Code	Column	Range
Ed. Background	2	1 ↓ 7	8	1-7
			9 | 10 | 11 | 12	

Field of Study	3	Column	Degree	Spec.	Ag Ed.	Ext Ed.	Other	1-5
		9	1	2	3	4	5	
		10	1	2	3	4	5	
		11	1	2	3	4	5	
		12	1	2	3	4	5	

Job Tenure	4	1 2 3 4	13	1-4
			14 | 15 | 16 | 17 | 18	1-5

		Years			
		1 or less	2 thru 5	6 thru 9	10 or more
14	Agent	1	2	3	4
15	VA Sec	1	2	3	4
16	VA Postsec.	1	2	3	4
17	Other Professional & Tech.	1	2	3	4
18	Other Military or Actual	1	2	3	4

Analysis of Situation

Variable	Column	Variable	Column	Range
1	19	19	37	1-3
2	20	20	38	
3	21	21	39	
4	22	22	40	
5	23	23	41	
6	24	24	42	
7	25	25	43	
8	26	26	44	
9	27	27	45	
10	28	28	46	
11	29	29	47	
12	30	30	48	
13	31	31	49	
14	32	32	50	
15	33	33	51	
16	34	34	52	
17	35			
18	36			

Planning The Educational Program

Variable	Column	Variable	Column	Range
1	53	10	62	1-3
2	54	11	63	
3	55	12	64	
4	56	13	65	
5	57	14	66	
6	58	15	67	
7	59	16	68	
8	60	17	69	
9	61			

1 2 3

4

5

Methods & Techniques

1	6	13	18	1-3
2	7	14	19	
3	8	15	20	
4	9	16	21	
5	10	17	22	
6	11	18	23	
7	12	19	24	
8	13	20	25	

Methods & Techniques (continued)

Variable	Column	Variable	Column	Range
9	14	21	26	1-3
10	15	22	27	
11	16	23	28	
12	17	24	29	
25	30	44	49	
26	31	45	50	
27	32	46	51	
28	33	47	52	
29	34	48	53	
30	35	49	54	
31	36	50	55	
32	37	51	56	
33	38	52	57	
34	39	53	58	
35	40	54	59	
36	41	55	60	
37	42	56	61	
38	43	57	62	
39	44	58	63	
40	45	59	64	
41	46	60	65	
42	47			
43	48			

Evaluation of Local Program

Variable	Column	Variable	Column	Range
1	6	10	15	1-3
2	7	11	16	
3	8	12	17	
4	9	13	18	
5	10	14	19	
6	11	15	20	
7	12	16	21	
8	13	17	22	
9	14	18	23	
		19	24	

Re-Analysis of Local Situation

1	25	7	31
2	26	8	32
3	27	9	33
4	28	10	34
5	29	11	35
6	30		

Personal Characteristics

Variable	Column	Variable	Column	Range
1	36	9	44	1-3
2	37	10	45	
3	38	11	46	
4	39	12	47	
5	40			
6	41			
7	42			
8	43			

APPENDIX K

Cover Letter and List of National Jury of Experts

TEACHING RESEARCH EXTENSION

COOPERATIVE EXTENSION SERVICE

UNIVERSITY OF NEBRASKA EAST CAMPUS LINCOLN, NB 68503

February 17, 1971

Mr. Ray Ranta
Director, Agricultural Personnel
Agricultural Science Center
University of Kentucky
Lexington, Kentucky 40506

Dear Mr. Ranta:

I am making a study to determine the professional competencies required by agricultural educators. It is hopeful this study will be of value in the planning of college preparation programs for instructors of vocational agriculture, both secondary and postsecondary as well as county extension agents.

You have been randomly selected as one of eight persons to serve as a national expert from all the colleges and universities in U.S.A. to provide your opinion about the enclosed instrument.

Would you please take a few moments from your very busy schedule to react to the enclosed study questionnaire. As you complete the questionnaire, please mark those areas which may seem ambigious or redundant, adding any items you feel have been omitted. Your reaction will assist me in revising the instrument.

Please respond as though you are or will be a county agricultural extension agent, and return the questionnaire in the self-addressed envelope.

I would be most grateful for your assistance. If you have specific questions please indicate on the questionnaire or by special letter and I will call you for clarification.

Sincerely,

RONALD E. STOLLER
EPDA
Division of Instructional Services
State Department of Education

RES:fh
Enclosures

Dear Colleague:

It is my belief and I think you will agree, that Mr. Stoller has set himself to a timely and important study. I bespeak for him your valued opinion and assistance toward improved agricultural education.

ROBERT J. FLORELL, State Leader
Studies and Training

THE UNIVERSITY OF NEBRASKA
COLLEGE OF AGRICULTURE AND HOME ECONOMICS
LINCOLN, NEBRASKA, 68503

DEPARTMENT OF AGRICULTURAL EDUCATION

February 17, 1971

A. B. Rougeau, Ed. D., Head Professor
Department of Agricultural Education
College of Agriculture
Arkansas State University
State University, Arkansas 72467

Dear Dr. Rougeau:

I am making a study to determine the professional competencies required by agricultural educators. It is hopeful this study will be of value in the planning of college preparation programs for instructors of vocational agriculture, both secondary and postsecondary as well as county extension agents.

You have been randomly selected as one of eight persons to serve as a national expert from all the colleges and universities in U.S.A. to provide your opinion about the enclosed instrument.

Would you please take a few moments from your very busy schedule to react to the enclosed study questionnaire. As you complete the questionnaire, please mark those areas which may seem ambigious or redundant, adding any items you feel have been omitted. Your reaction will assist me in revising the instrument.

Please respond as though you are or will be an instructor of vocational agriculture, and return the questionnaire in the self-addressed envelope.

I would be most grateful for your assistance. If you have specific questions, please indicate on the questionnaire or by special letter and I will call you for clarification.

Sincerely,

RONALD E. STOLLER
EPDA
Division of Instructional Services
State Department of Education

RES:fh

Enclosures

Dear Ag Teacher Educator:

It is my belief and I think you will agree, that Mr. Stoller has set himself to a timely and important study. I bespeak for him your valued opinion and assistance toward improved agricultural education.

JAMES T. HORNER, E. D., Chairman
Department of Agricultural Education

National Jury of Experts Selected at
Random from Heads of Departments of
70 Universities in United States
(Used Table of Random Numbers)

Agricultural Education – Voc. Ag.

A. B. Rougeau, Ed. D. Head Professor
Department of Agricultural Education
College of Agriculture
Arkansas State University
State University, Arkansas 72467

O. E. Thompson, Ph. D. Professor and Chairman
Department of Applied Behavioral Science
University of California
Davis, California 95616

Irving C. Cross, Ph. D. Associate Professor
Agricultural Education Section Head
Department of Vocational Education
Fort Collins, Colorado 80521

Paul E. Hemp, Ed. D. Professor and Chairman
Professor and Chairman
Division of Agricultural Education
University of Illinois
Urbana, Illinois 61801

Robert C. Jones, Ed. D. Assistant Professor and Head
Agricultural Education
University of Massachusetts
Amherst, Massachusetts 01002

Charles Drawbaugh, Ed. D. Associate Professor and Chairman
Department of Vocational Technical Education
Rutgers University
New Brunswick, New Jersey 08903

David R. McClay, Ph. D. Professor and Head
Department of Agricultural Education
101 Agricultural Education Building
The Pennsylvania State University
University Park, Pennsylvania 16802

F. B. Wines, M. C. Acting Head
Agricultural Education Department
Texas A & I University
Kingsville, Texas 78363

Agricultural Extension Education Selected at Random from Fifty States in United States (Used Table of Random Numbers)

Win Lawson
Assistant State Director
Agricultural Extension Service
359 University Hall
University of California
Berkeley, California 94720

George E. Whitham
Assistant Director for Programs
Cooperative Extension
University of Connecticut
Storrs, Connecticut 06268

Ray R. Ranta
Director, Agricultural Personnel
Agricultural Science Center
University of Kentucky
Lexington, Kentucky 40506

Robert J. Florell
State Leader, Extension Studies and Training
Agricultural Hall
University of Nebraska East Campus
University of Nebraska
Lincoln, Nebraska 68503

William J. Daw
Director of Training
Rutgers - The State University
New Brunswick, New Jersey 08903

Robert S. Dotson
Training and Studies Specialist and Leader
University of Tennessee
Knoxville, Tennessee 37901

James D. Netherton
Coordinator of Personnel Development and Field Studies
University Extension
Oklahoma State University
Stillwater, Oklahoma 74074

Wesley T. Maughan
Staff and Community Development Leader
Agricultural Extension Service
Utah State University
Logan, Utah 84321